

small air forces observer

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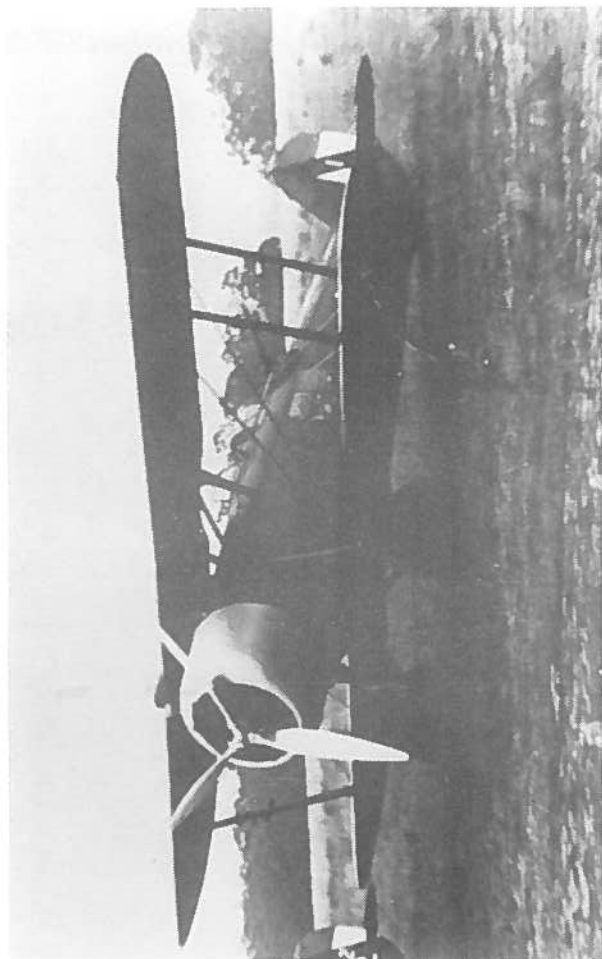


Aircraft of the Slovak National Uprising
Modeling the Finnish & Spanish Fiat G.50
Philippine Army Air Corps 1935-1942
Greek Gloster Mars VI
Brazilian Savoia S-55
Uruguayan F.4 Buzzard
Last Portuguese T-33
Uruguayan Ro.36bis
Grumman Goblin

4 EXTRA PAGES

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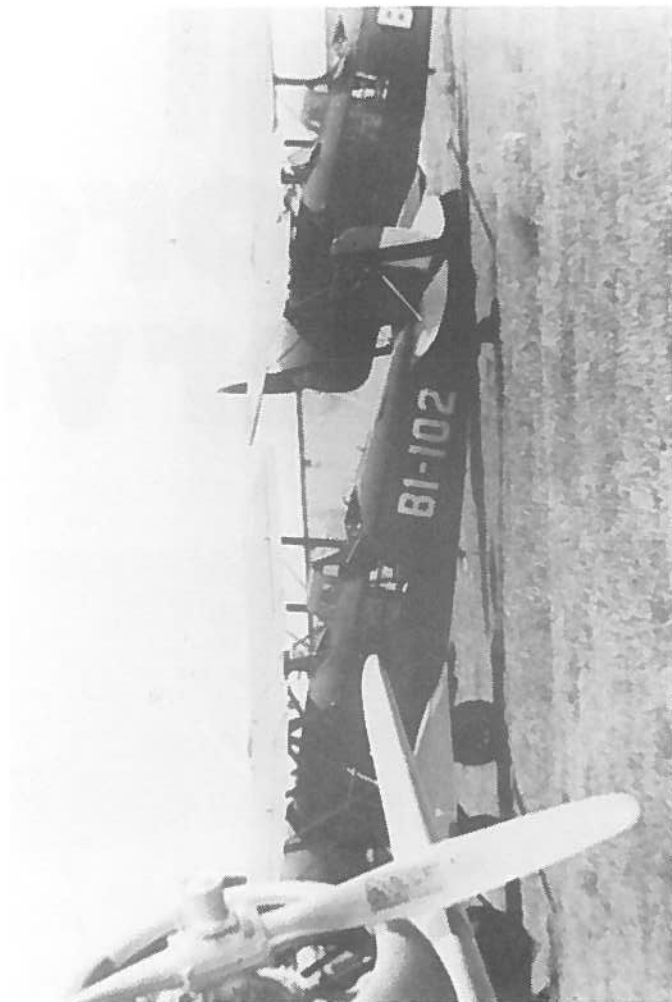
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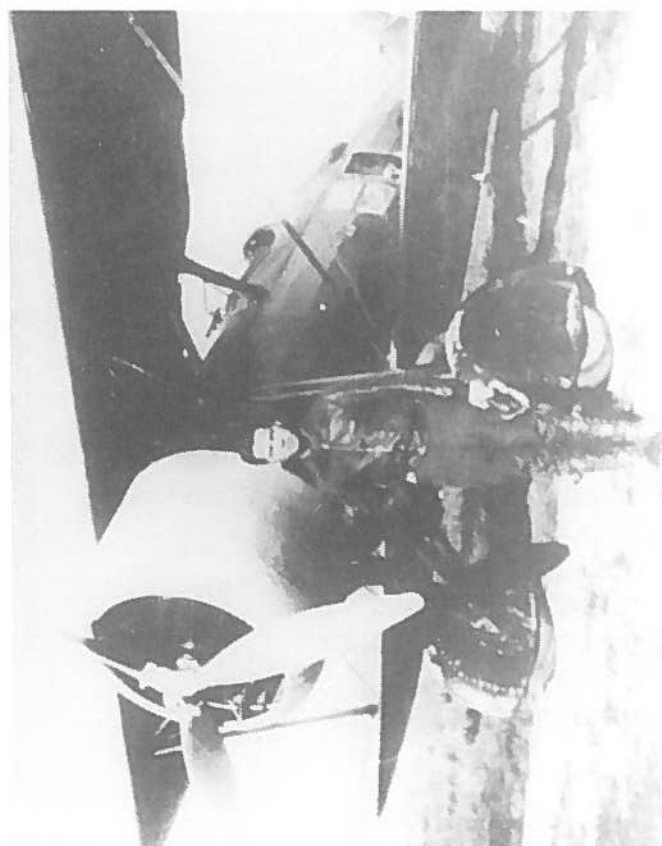
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SMALL AIR FORCES OBSERVER

The Newsletter of the Small Air Forces Clearing House

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SAFO EDITORIAL POLICY: The purpose of the SAFCH is to "promote interest in the history and modeling of the aircraft of the smaller countries". In support of this goal, the SAFCH encourages international cooperation in researching aviation history, both military and civil, from all periods of time, and for all the smaller countries. In return for this support, members are asked to submit occasional progress reports for publication in the SAFO. While the final results should appear in the most prestigious publication possible, it is requested that the SAFCH be mentioned (with address) in the article and that SAFO be afforded the opportunity of reprinting the material. Article published in SAFO can be reprinted provided permission of the author is obtained and the SAFO is identified in the reprint.

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BACK ISSUES: Either back issues or Xerox copies of out-of-print issues are available for all issues of

the SAFO published. For a list of all issues and their content, send two 1st class stamps (or 2 IRCs) to the editorial office.

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INFORMATION FOR AUTHORS: Manuscripts may be submitted in any form; authors whose first language is not English may submit a rough translation of the text and the editorial office will put it into good English. Authors using a computer should send the manuscript on disc. Photo should be black and white prints although color prints can be used. If you want any photos returned, please mark "Return" on the back. All art work must be ready for printing. The layout should be such that when a page is reduced (if necessary) the drawing should fit into the 7.5 inch by 10 inch working area of the final page. Art work that does not fit this requirement will have to be cut and pasted to fit; no problem, but things might not look exactly as you want them to look. All work for the SAFO is voluntary and no payment can be made for published material.

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LOST MEMBERS: Anyone knowing the whereabouts of the following 'lost' SAFCH members please inform the editorial office (last known address included): Eric Stoutenburg, Ft. Carson, CO; Curtis Marzolf, Bulverde, TX; E. Tronn, Montreal, PQ Canada; Alain La Pierre, Maracay, Venezuela; Michael Parr, Prince George, B.C. Canada; Richard Harrison, Stroudsburg, PA; Ellis Estes, Alexandria, VA. Gary Lepinski, Minneapolis, MN; Andrzej Lesicki, Poznan, Poland.

COVER COMMENTS: The Stearman 76D, alias BT-1, was the mainstay of the Philippine Army Air Corps during its short existence. Note the enclosed canopy. The story of the PAAC begins on page 112. (Photo via Bert Anido)

ESTATE SALE: Hundreds of books and magazines continue to use up valuable space in my office. These will have to be sold or they will be tossed into the recycling bin. This latter would be a real shame since there are some very nice information in this collection. Everything has now been priced: Magazines from \$0.50 to \$1.00; soft-bound books \$1.00 to \$5.00; hard-bound books \$5.00 and up (there are some excellent books remaining). In addition, a collection of decals has just been obtained. This collection includes many rare and long-unobtainable sheets such as Stoppie and ABT. Send \$1.00 (or two IRC) and a legal-size SASE for list of magazines, books, and decals.

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3. Be sure to furnish all circulation information called for in item 15. Free circulation must be shown in items 15d, e, and f.			
4. If the publication has second-class authorized status as a general or regular publication, the Statement of Ownership, Management, and Circulation must be published, it must be printed in any issue in October or if the publication is not published during October, the first issue printed after October.			
5. In item 16, indicate the date of the issue in which the Statement of Ownership will be published.			
6. Item 17 must be signed.			
Filing to file or publish a statement of ownership may result in suspension of second-class authorization.			
PS Form 3526, September 1995 (Rev. 11/95)			

AUSTRALIA

AUSTRALIAN PLASTIC MODELLERS ASSOCIATION (APMA, PO Box 51, Strathfield, NSW 2135; 4 issues sea mail A\$27; air mail A\$30). 3/96 (32 pages) "Gaudy Gannet" 2 pages including a 4-view drawing of an RAAF a/c in RN markings. "The Ubiquitous Clacktor" 3 pages including scale drawings of 3 types of Clark tow tractors. "More Miraculous Kits" 3-page review of large-scale Mirage III kits including 2-view drawing of RAAF a/c. "First RAAF Rotary" 2 pages including 2 side-view drawings of Sikorsky S-51. "Farman F.231 in Spain" 1/2-page including 2 side-view drawings. "Nine Lives" 21 pages on the Wildcat/Martlet including 12 side-view drawings with top and bottom plan-views of wings, F4F-4B standard RN paint scheme, 4 full-page photos of cockpit interior, and kit reviews. [This is a reprint from an article that appeared in the IPMS-UK magazine, with updated kit reviews added.]

NEWS AND VIEWS (IPMS NEW SOUTH WALES), PO Box 637, Broadway, NSW 2007; 4 issues A\$30.00 air mail).

13/1 (36 pages) "MiG Manifesto: The MiG-19 Farmer Pt.2" 6 pages including a page of sketches of details and 12 side-view drawings (Soviet, Czech, Romanian, Cuban, Polish, Hungarian, & East German). "Bent Wing Night Bird" 4 pages including 3 side-view drawings. "Market Survey: The Corsair in 1/48 Scale" 3 pages reviewing kits, conversions, & detail sets. "Building the Corsair Night Fighter in 1/48: The Hard Way" 4 pages. "The Spitfire 14 in RAAF Service" 2 pages including 5 side-view drawings. "Short Run CA-1: Building Ventura's 1/72 Wirraway" 2 pages including one side-view drawing.

AUSTRIA

OFH NACHRICHTEN (Oesterreichische Flugzug Historiker, Felberstrasse 104/7, A-1150 Wien. Write for free sample.)

3/96 (32 pages) "20 Jahre PC-6" 3 pages including 5 photos. "Italienische Jagdflieger 1915-1918" 8 pages including 5 photos and table of "aces". Photos: Austrian Saab J-29F & Aviatik Berg C.1.

BELGIUM

KIT (IPMS Belgium, c/o Michel Willot, dreve de Champagne 14, B-1190 Bruxelles; 4 issues US \$25 in cash, International Postal Money Order for 750 BF.

#102 2/1996 (36 pages) "Focke-Wulf 190D-9 (et al)" 13-page modeling article including 7 side-view drawings, 8 photos of a/c, & 2 photos of model.

BRAZIL

EM ESCALA (IPMS Brazil, Rua Lucidio Lago, 457/206 - Meier - Rio, RJ, CEP 20780-020. Subscription is \$10.00, but they prefer kits or accessories. Send to Antonio Pereira Linhares at the above address.)

#82 (16 pages) "Errata" 1/2-page corrections to drawings of Paraguayan Fiat CR-20 from issue #80.

CANADA

RANDOM THOUGHTS (IPMS Canada, Box 626, Stn. B, Ottawa, Ontario K1P 5R7; 6 issues for US \$24.00 in US \$26.00 elsewhere).

24/6 (24 pages) "442 Squadron Yellow Mustangs" 2 pages including 4 side-view drawings. "Edmonton Special P-51" 4 pages on building a Yellow Mustang including 3 photos of model. "CP-121A Tracker" 4

pages on modifying the Hasegawa kit including 4 photos of model and a page of sketches. "Building Pioneers 2's Focke Wulf Ta-154" 2 pages with 3 photos of model. "Reviewing Tamiya's FW 190D-9" one page including 2 photos of model. "Building the Dragon FW 190D-9" 4 pages including 5 photos of model and sketches.

CZECH REPUBLIC

ZLINEK (Jaromir Stepan, P.S. 8, 763 14 Zlin 12). Text in English.

No.4 Vol.III (32 pages) "Bf 109G-10: The Most Agile Gustav" 12 pages including 9 photos, 2 pages of 1/72-scale drawings, 2 pages of sketches, a 2-page 4-view color drawing, and 10 color side-view drawings (Italy, Croatia, Hungary, & Czechoslovakia). "Mi-2 Hoplite" 13 pages including 27 color & 7 b&w photos of details, 2 pages of 1/72-scale drawings, color cover painting, 12 color side-view drawings (Czech, German, Polish, East German, Soviet, & Slovak). "Three Stories of One Wing" 4 pages including 6 color photos of Czech MiG-21 with one wing camouflaged and one uncamouflaged. "Su-25 'Shame of the Air Base Saki'" one page on an dirty-white Ukrainian Frogfoot including one color photo and a color 3-view drawing. "Universal Rocket Launcher UB-16" one page including scale drawings of 4 variants. VES Models (Zlinek) announces a 1/72-scale injection-molded Avia S-99 as well as more Soviet underwing weapons.

ZLINEK JUNIOR (Jaromir Stepan, P.S. 8, 763 14 Zlin 12). Text in Czech.

4/96 (16 pages) "Jeste o C-2" 4 pages including 10 photos of Czech Ar 96. "Zis-5" 2 pages including one photo and 2 scale drawings of Soviet truck.

AERO PLASTIC KITS REVUE (Vydavatelství Model Hobby Press, ul. 1. maje 11, 709 00 Ostrava-Mar. Hory, Czech Republic. 6 issues \$33 surface or \$45 air.)

#32 (74 pages) "Vojenske Letectvo Indie 1932-1994" 8 pages including 10 photos and 12 color drawings (Wapiti, Hurricane, Spitfire T.IX, Spitfire FR.XIV, Tempest, Vampire NF.54, B-24J, Ouragan, Mystere IVA, Hunter, & Canberra). "Prvni Najezd: 2.cast" 5 pages including 5 photos, one map, and 4 color drawings (Nell, Claude, and Wildcat). "Thomas McGuire" 6 pages including 13 photos and 4 color drawings. "Mirage nad Aplami" 4 pages including 5 photos and 4 color multiview drawings. "Fokker E.III/E.IV" 9 pages including 13 photos, a full-page cutaway drawing, 3 pages of 1/72- and 1/48-scale drawings, and 3 color multiview drawings. "J.N. Kruten: 2.cast" 4 pages including 5 photos and 4 color multiview drawings (Nieuport 12, 21, & 23). "Pod Znackou La: 1.cast" 8 pages on the LaGG-3 including photos, 2 pages of 1/72-scale drawings, and 4 color multiview drawings (Soviet & Finnish). "De Havilland DH.98 Mosquito: 1.cast" 9 pages on the FB.VI & FB.XVIII including 9 photos, 2 pages of sketches, 2 color multiview drawings.

#33 (76 pages) "Vojenske Letectvo Indie 1932-1994: 2.cast" 9 pages including 9 photos and 10 color drawings (Ajeet, MiG-21, & Su-7). "Amerika Bomber z MPM" 6 pages on the Glen and a review of the 1/72-scale MPM kit including 11 photos, a 2-page 1/72-scale drawing, and 2 color multiview drawings. "Letci Polskeho Puvodu na Bojstich 2.Svetove Valky" 5 pages on airmen of Polish decent in US service during WWII. "De Havilland DH.98 Mosquito" 11 pages including 11 photos, full-page cutaway drawing of Sea Mosquito TR.33,

3 pages of 1/72-scale drawings of FB.VI, FB.XVII and T.III, 5 color drawings (Sweden, China, Dominican Republic, Czechoslovakia, & Turkey), and drawing of a torpedo-carrying, Yugoslav FB.VI. "Hawker Hunter u Flygvapnet" 2 pages including 4 photos and 2-view drawings of Swedish Hunter. "Clive Robertson Caldwell" 9 pages including 14 photos and 8 color multiview drawings (Tomahawk, Kittyhawk, & Spitfire). "Pod Znackou La: 2.cast" 10 pages including 8 photos, 2 pages of 1/72-scale drawings, and 8 color multiview drawings (Soviet La-5). "Prvni Najezd: 3.cast" 4 pages including 6 photos. "Jevgraf Nikolajevic Kruten: 3.cast" 4 pages including 5 photos. #34 (76 pages) "Vojenske Letectvo Indie 1932-1995" (3 cast) 8 pages including 12 photos and 10 color drawings (HF-24 Marut, Jaguar 1B, Jaguar 1M, Mirage 2000, MiG-23MF, MiG-23BM, MiG-27L, MiG-25RU, & MiG-29). "Jeste Jednou Bratri Predyove" 4 pages including 3 photos and 4 color drawings of P-47 & P-51 flown by George Preddy. "Trpaslik od McDonnella" 5-page review of MPM kit of the XF-85 Goblin including 10 photos and 2 pages of 1/48-scale drawings. "Valka v Jiznim Atlantiku v Roce 1982" (1 cast) 8 pages including 9 photos and 3 color side- and plan-view drawings (Sea Harrier, Mirage IIIEA, & Vulcan). "Zatoulane Mirage 5J" 5 pages including 8 photos, 3 tables, and 4 color drawings of Chilean a/c. "Stilaci Proudove 'Migy': MiG15" (3 cast) 7 pages including 13 photos and 2 pages of 1/72-scale drawings. "Operation Matterhorn" 7 pages including 7 photos and 4 color drawings of B-29. "Odpocinek na Severu" 4 pages including 6 photos and 4 color drawings of Czech-flown Spitfires. "Fouga CM 170 Magister" (1 cast) 6 pages including 13 photos and 4 drawings (French & Israeli). "Pod Znackou La" (3 cast) 8 pages including 7 photos, 2 pages of 1/72-scale drawings (La-7 & La-7UTI), and 6 color drawings.

#35 (76 pages) "Ceskoslovenski Stihaci v Ostravске Operaci" 5 pages including 7 photos and 6 drawings (port, starboard, and top) of La-5FN. "Valka v Jiznim Atlantiku v Roce 1982" (2 cast) 6 pages including 5 photos and 5 color drawings (Victor, Nimrod, Canberra (in Chilean markings), Hercules, & VC.10). "Operace Matterhorn" (2 cast) 7 pages including 8 photos and 4 color drawings (B-29 & C-46). "Barwy Americkeho Letectva 1919-1941" 4 pages including table of color matches and 12 color drawings. "Fouga CM 170R Magister" (2 cast) 8 pages including 7 photos, 2 pages of 1/72-scale drawings, and 10 color drawings (Germany, El Salvador, Belgium, Brazil, Austria, & Finland). "Pierre Clostermann" 5 pages including 8 photos and 4 color drawings (Spitfire & Tempest). "Stihaci Proudove 'Migy': MiG-15" (3 cast) 4 pages including 12 photos. "Vojenske Letectvo Indie 1950-1995" (4 cast) 6 pages including 11 photos and 12 color drawings (C-119, Krishak, An-12, An-32, Do-228, Il-76, Mi-4, Lama, Alouette III, Mi-25, Mi-17, & Mi-26).

#36 (76 pages) The entire issue is devoted to the P-51 including over 100 photos, 6 two-page multiview drawings (P-51, A-36A, P-51A, P-51B/C Mustang, P-51D-10, & P-51H-5-NA), 3 pages of 1/72-scale drawings (NA-73X, Mustang Mk 1, P-51/F-6A, A-36A, P-51A, Mustang Mk.X, Mustang Mk.III, F-6B, P-51D-5, F-6D/K, XP-51F, XP-51J, P-51H-10, & Temco TF-51D), and 9 pages of color side-, top-, & bottom-view drawings (including Polish 'UZ-D' & 'PK-G').

#37 (76 pages) "Valka v Jiznim Atlantiku v Roce 1982" (3 cast) 9 pages including 12 photos and 4 color drawings (Boeing 707, Wessex, & Wasp).

"Operace Matterhorn" (3 cast) 8 pages including 15 photos. "Fairey Seafox" 8-page kit review including 11 photos, 2 pages of 1/72-scale drawings, and 3 color drawings. "Zhave Vystrely Studene Valky 3" 7 pages including 8 photos and 10 color drawings (USN F-14 & F/A-18, Libyan MiG-23, French Jaguar, Zaire Mirage 5, South African Impala & Buccaneer, Angolan MiG-21, and Mozambique MiG-17). Ryan FR-1 Fireball a XF2R-1 Dark Shark" 8 pages including 12 photos, 4 pages of scale drawings, and review of MPM Fireball kit. "Luftwaffen Experten: Major Gunther Rall" 7 pages including 9 photos and 9 color drawings of a/c flown by Rall (Bf 109, Fw 190, RF-84F, & F-104). "Hawk 100 z Hawku T.Mk.1 od Itali" 3 pages on conversion including 8 photos of model. "Vojenske Letectvo Indie 1939-1995" 5 Cast. 5 pages including 8 photos, 5 color drawings (Ht-2, HPT-32, TS-11, & Kiran), and current Order of Battle. "Stihaci Proudove Migy: MiG-15" 6 pages including 10 photos and full-page cutaway drawing. #38 (76 pages) "Letadla nad Guatemalou a Operace Succes" 3 pages including 4 photos (P-26A, F-51D, F-47N, & A-37B), and list of kits that can be built in Guatemalan markings. "Sedmnactka" (1.cast) 8 pages on MiG-17 including 5 photos. "Morane-Saulnier Typ N" 4 pages on building the Eduard kit including 5 photos of model and a page of 1/72-scale drawings. "Valka v Jiznim Atlantiku v Roce 1982" (4.cast) 11 pages including 14 photos and 9 color drawings with appropriate plan views (Sea Harrier, Dagger, T-34C, Lynx, Sea King, Camberra, Super Etendard, SP-3H Neptune, & A-4D Skyhawk). "Vrtulnik z Valasska" 4-page review of the Aeroteam 1/72-scale model of the Mi-2 including 12 photos of the model and 16 color photos of an a/c in Czech markings. "Suchoj Su-27 Flanker" (1.cast) 8 pages including 9 photos and 2 pages of scale drawings. "Major Boleslaw Michal Gladych" 3 pages including 4 photos and 5 color drawings of a/c (C.714, Spitfire, & P-47) flown by the Polish ace. "Horten Ho 229" 4-page review of the Dragon kit including 6 photos of the a/c and 11 of the model. "Protivzdušna obrana Japonska" 5 pages including 8 photos and 5 color drawings (Ki-44, Ki-100, Ki-61, Ki-46, & Ki-45). "Z Historie Cs. Letectva: 9. Stihaci Letecký Pluk" 4 pages including 7 b&w photos, 11 color photos, and 6 color drawings of Czech MiG-21s. "Vojenske Letectve Sily USA 1939-1945" 5 pages including 9 photos of models and 10 color drawings (SB2U, SBD, TBD, TBM, SB2C, A-26, B-26, B-25, B-24, & B-17). #39 (76 pages) "Letectvo Republiky Malta" 5 pages including 5 b&w photos, one color photo, and 4 color drawings (AB-47G, AB-206A Jet Ranger, HM-369, & O-1B Bird Dog). "Valka v Jiznim Atlantiku v Roce 1982" (5.cast) 7 pages including 10 photos and 4 color drawings (A-4Q Skyhawk, IA-58A Pucara, MB-339A, & A-4P Skyhawk). "Fieseler Fi 167" 7 pages including 7 photos, 3 pages of scale drawings, and a color 5-view drawing. "Vrtulnik Westland Wessex Ocima Modelare" 5 pages including 5 photos of a/c, 3 photos of model, and 7 drawings of variants. "Z Historie Cs. Letectva: 'Aeroexpres' 9. Stihaci Letecký Pluk Podruhe" 4 pages including 8 color photos and 4 color drawings (L-29 Delfin). "Suchoj Su-27 Flanker" (2.cast) 10 pages including 5 photos and 5 pages of scale drawings. "Major Stanislaw Skalski" 4 pages including 8 photos and 3 color drawings (P-11c & Mustang III). "Sedmnactka" (2.cast) 8 pages including 13 photos and 2 pages of 1/72-scale drawings (MiG-17A & MiG-17F). "Saab 105 a jeho Verze" 10 pages including 10 b&w photos, 9 color photos, and 6 color drawings (Sweden & Austria) and 3 pages of scale drawings (Sk-60B, 105O, 105XT, & Sk-60C). "Luftwaffe Experten: Major

Gerhard Homuth" 5 pages including 5 photos and 4 side-view drawings with appropriate plan views (Bu 133, Bf 109E, Bf 109F, & Bf 109G).

DENMARK

NYT (IPMS Denmark, c/o Bjorn Jensen, Rosen-vaegets Alle 6, 2100 Kobenhavn 0; 4 issues for 90 Dkr surface, 100 Dkr airmail). Each issue includes a two-page English summary.

#71 (32 pages) "Dansk Panser i 30'erne: M 39 Lynx" 4 pages including 4 photos.

#72 (40 pages) "RDAF Aircraft (Part 1): F-84 Thunderjet" 9 pages including 5 photos and 4 pages of drawings (two 3-view and one 4-view drawings).

ENGLAND

AIR PHOTOGRAPHIC INTERNATIONAL (CK Publishing, 14 Eastcote Road, South Harrow, Middlesex, HA2 8LG, England. £20.00 surface £27 air mail. Cheques payable to CK Publishing. IMO in Sterling or credit card.)

#15 October-December 1996 (44 pages) "USAF Heavy Metal" 6 pages with 11 photos. "Kiev Institute of Civil Engineering" 2 pages with 4 photos. "Guvercinlik, Turkey" 2 pages with 4 photos (U-17B, OH-58B, Skyservant, & Robinson R.22B). "Spotlight on Manila" 6 pages with 11 photos (Police AS350 Ecureuil & Phil. AF Fokker F27). "Latvian Air Force" 2 pages with 4 photos (Mi-2, 2 An-2, Let-410). "DH.114 Heron" 2 pages with 4 photos (Malaysia). "Tel Nov - 1995" 6 pages with 11 photos (F-15, C-130, MD-500, U.206, AH-1 Cobra, F-4, Fouga Magister, Arava, A-4H, F-16, & PA-18). "Airbus A.300" 2 pages with 4 photos. "Special Colours 7" 2 pages with 4 photos (Canadian CF-188A, Belgian Alpha Jet, French Mirage IVP, & South African C-130B). "Yakovlev Yak-40" 6 pages with 11 photos. "Greek AF T-37s" one page with 2 photos. Peruvian AF 707.

IPMS MAGAZINE (Ernie Lee, 51 Ball Road, Hillsborough, Sheffield, South Yorkshire S6 4LZ, 6 issues for £20.00 (US subscription agent: Wise Owl Publications, 4314 West 238th St., Torrance, CA 90505; since exchange fluctuates write Joe for current rates).

5/96 (40 pages) "Jutland Part V" 8 pages on building the Bellerophon. "Junkers Ju 87 Stuka" 2-page review of Ju-87A kits including 3 photos of models. "Doodlebug Destroyer: Hawker Tempest V versus Fi 103" 6 pages on building a diorama including 8 photos and 2 pages of drawings of color schemes. "The Maurice Farman MfII" one page on building and rigging the Blue Ridge (sic) vacuform MfII including hints on using Strutz brass struts and lycra (a stretchable rigging material that is cut "1/2-3/4 inch shorter than required distance").

PLASTIC KIT CONSTRUCTOR (PAMAG (Publications) Ltd., 3 Lowfield Court, Old Forge Business Park, Sark Road, Heeley, Sheffield, S2 4HG; 4 issues £18.00. In USA/Canada order from J.J. Daileda, 4314 West 238th St., Torrance, CA 90505; since exchange rates fluctuate write Joe for current rates).

#47 Autumn 1996 (32 pages) "Producing the Lebed XII in 1/72nd scale from a Joystick Albatros C.1" 2 pages including 1/72-scale drawings and 3 photos of the model. "Mil-24 Hind" 3 pages including 9 close-up photos of Czech a/c. "Sukhoi Su-7BM" 2 pages with 5 side-view drawings (Soviet, Czechoslovak, & Polish). "Historic Wings Cierva C.30 Autogyro 1/72nd scale kit" 1/4 page review with one photo of the model. And, the usual plethora of outstandingly-well-done kit reviews.

SMALL SCALE AVIATOR (Delta Aviation Publishing, 38 Hawksley Avenue, Hillsborough, Sheffield S6 2BE, South Yorkshire, England. Subscription £16.60 UK, £18.50 Europe, £26.50 rest of world. Payment by Sterling cheques or credit card to Athena Books, 34 Imperial Crescent, Town Moor, Doncaster DN2 5BU, South Yorkshire.) Vol 1, No 2 Autumn 1996 (36 pages) "Sabre with a Hook" 2 pages on converting an F-86E to an XFJ-2 including 2 photos of the model and sketches. "Fairford's IAT'96" 2 pages with 6 photos (Ukrainian Su-17 & Il-76, Omani C-130, Russian Il-38, & IFOR RN Sea King). "Franco and Finland's Fighting Freccias" 3 pages on using the Dujin conversion kits to turn the Airfix G-50bis into Spanish and Finnish versions. "Reference File: P-47 Thunderbolt" 2-page survey of kits, conversion and detail sets, decals, and "good references". "USSAF Beaufighter" 3 pages including 3 photos of the model and drawings of the camouflage pattern. "A Gallic Baby" 2 pages on modeling the Nieuport 11 using Roseparts conversion set and Blue Rider Serbian decals including 3 photos of the model. "MiG 31 Foxhound" 2 pages with 8 photos of details. "Reichdreams: Blohm & Voss P.192.01-01" 2-page 1/72-scale drawing by Justo Miranda. Plus lots of informative reviews of kits and books.

SWEDISH AIRFORCE SIG (Ted Burnett, 19 Tintagel Close, Parkside Grange, Cramlington, Northumberland, England NE23 0NZ. Subscription £3.00 UK, £5.00 Europe, \$15.00 USA).

#22 October 1996 (40 pages) "TP 3 de Havilland DH 90 Dragonfly" 3-page history and review of Rugratsresin kit. "Aerospatiale AS332 Super Puma Hkp 10" 5 pages on history and conversion of the Heller kit including 2 pages of sketches. "A Swede in a Foreign Land" one page on a Swedish T-6 in UN markings in Lebanon. "A review of the Top Gun 1/72 Scale Resin Conversion Kit for the Avro Lancaster TP 80" 2-page review of one of a new line of resin kits from Poland. "The SAAB 17" 13 pages including 16 side-view drawings of a/c in Swedish markings. "Export Gem: SAAB's Sapphire" 6 pages including 9 3/4-front view drawings (Sweden, Ethiopia, Austria, Tunisia, & Finland).

IPMS-MALLARI (IPMS Finland, PL 798, 00101 Helsinki 10; 6 issues \$20.00, no check accepted due to the high redemption costs).

#113 (24 pages) "Modelling the T-60 Soviet Light Tank" 8 pages including 9 photos and 2 pages of drawings. [Editor's note: An interesting example of international cooperation: the author is Italian, the text is in English, and the magazine is Finnish.] "Polikarpov I-16" 5 pages including one photo of I-16 in Finnish markings and 3 close-up photos of Finnish I-16 with ski undercarriage.

#114 (24 pages) "Messerschmitt Bf/Me 109F/G by Italeri 1/72" 13 pages including 6 photos of Luftwaffe 109s in Finland. "Hornetologia osa II" 3 pages including 8 photos of Finnish Hornets.

SUOMEN ILMALIIHISTORIALLINEN LEHTI (InScale 72, Makelankatu 5B10, 00550 Helsinki; Europe \$25, elsewhere \$30; payment by International Postal Order or in cash; no cheques of any kind accepted because of high redemption rates). Each issue includes a 2-page English summary. 3/1996 (24 pages) "Finns in Red Naval Aviation March 1921: Part 1" 3 pages on the crushing by Soviet forces of the revolt at Kronstadt Naval Base in MArch 1921 including 3 photos of Soviet a/c (Ju-20 & Fairey III). "Georg Jaderholm: Part 1" 3 pages on experiences in FAF including 5 photos (Latvian IVL A22, and Finnish IVL 24, & Kool-

hoven FK.31). "Rhonbussard" 2 pages on Finnish glider including 3 photos and scale 3-view drawing. "Saab 91 Safir" 5 pages on civil Finnish Safirs including 5 photos. "VEF I-12" 2 pages on crash of Latvian Civil Guard I-12 at Malmi including 2 magnificent photos. "Sharkmouth Finns" 1/2-page of drawings of MS-311 & MT-422.

FRANCE

Air Zone, Le Nouveau Mensuel de l'Air! (Air Zone, BP n.49, 28210 Nogent-le-Roi, France. A one-year subscription for 9 regular issues and two special issues is 405FF. Payment preferably by check drawn in FRF on a French bank, by draft or postal giro.) Each issue contains book and kit reviews and a one-page summary in English.

#13 (52 pages) Photo: Turkish F-4E. "Audeo Aciem" 10 pages including 19 photos of a/c flown by 1st Belgian Fighter Wing's during its 50-year history. "Air Album" 2 pages with 6 photos of Armee l'Air DHC-5 Twin Otter. "P' pour Photo" 1 pages including 17 photos on retirement of FAF Mirage IV. "Tiger Meet 96" 6 pages including 13 photos. "NATO TLP" 5 pages including 10 photos of a/c used in NATO's Tactical Leadership Program.

#14 (52 pages) "Audeo Aciem" 10 pages on the decommissioning of the 1st Belgian Fighter Wing including 19 color photos (Spitfire, Meteor, CF-100, F-104, & F-16), a list of a/c used, and 7 color photos of unit badges. "TDPU" 4 pages including 7 color photos (Belgian, Greek & Portuguese F-16, and German MiG-29). "Les Derniers SAAB Draken" 10 pages including 12 color photos and 4 color drawings of unit badges. "Potez-Fouga CM 170 Magister" 2 pages with 6 color photos of French a/c. "Cooperative Chance 96" 7 pages on the East-West exercise including 13 color photos (Belgian C-130, Romanian Puma, Bulgarian An-26, Polish Anokonda, Czech Mi-17, Hungarian MiG-29, Spanish Mirage FIC, & Dutch Fokker 60U).

JETS: Toute l'Aeronautique Moderne ((39 rue A. Briand, 62200 Boulogne Sur Mer, France. 420F for 12 issues).

#10 Octobre 1996 (52 pages) "Le 19th Congres de la Force Aerienne de Projection" 3 pages including 7 photos. "L'Ecole du Personnel Volant et ESC 56S" 5 pages including 11 photos. "Un Demit Siecle de Formation a l'Epner" 5 pages including 9 photos. "Yak-S2" 3 pages including 6 photos. "La Republic of China Air Force ou les Ailes de Taiwan" 8 pages including 19 photos (C-130H, TF-104G, AT-3A, S-2T, F-5E, F-5F, Ching Kuo IDf, F-104G, C-82, S-70C, Fokker 50, TH-55, OH-58D, & S-70C(M)-1). "Aeromacchi MB 326 sous le Ciel Zairois" 6 pages including 10 photos and two full-page color 2-view drawings of MB 326 in Congo and Zaire markings. "Esquadilha da Fumaca: Les Pionniers Brasiliens" 4 pages including 9 photos of Brazil's display team's Tucanos. "Exercice 'Hornet Nets 95'" 6 pages including 11 photos. "Tucano au Paraguay" 3 pages including 7 photos.

#11 Novembre 1996 (52 pages) "Le FAC se Prepare" 4 pages including 14 photos. Jaguar: Aviateurs au 2/71 Argonne" 6 pages including 10 photos. "Turk Deniz Kuvetleri (TDK)" 2 pages in Turkish Naval Aviation including 5 photos (S-2E Tracker, AB-204, & AB-212). "IDF Ching Kuo" 10 pages including 9 photos, 2-page cutaway drawings, and 3 pages of 1/72-scale drawings of RoCAF interceptor. "La Patrouille Suisse et ses F-5E Tiger II" 5 pages including 6 photos and color 3-view drawing.

AVIONS: Toute l'Aeronautique et son Histoire (39

rue A. Briand, 62200 Boulogne Sur Mer, France. 420F for 12 issues).

#42 Sept 96 (52 pages) "L'Avia B-534 en Operations sur le Front de l'Est" (5eme partie) 6 pages including 19 photos and 2 color side-view drawings. "Caproni Ca.73-Ca.74" (1ere partie) 3 pages including 11 photos. "La Saga des Potez 540/542" (Derniere partie) 5 pages including 11 photos, individual a/c histories, and 2 color side-view drawings. "21 Juin 1940: Un Bombardier de Reconnaissance Italien Survole Lyon" (2eme partie) 3 pages including 4 photos and a map. "Dornier 28D, l'Adac de la Luftwaffe" (2eme partie) 7 pages including 2-page cutaway drawing and 17 photos (Malawi, Sweden, Ethiopia, Kenya, Greece, Turkey, & Morocco). "Les Starck AS70 et Derives" (2eme partie) 8 pages including 24 photos. "L'Escadron de Transport et d'Entrainement ETE 44" 5 pages including 16 photos. "Les Heinkel He-111H.16 de Fabrication Espagnole" (1ere partie) 5 pages including 14 photos and a color cover painting. "Le Cam Penze 1917-1918" 5 pages including 16 photos and a map. #43 Oct 96 (52 pages) "La Militarisation de l'Aviation Civile Italienne durant la Seconde Guerre Mondiale" (1ere partie) 3 pages including 10 photos. "L'Avia B-534: L'Insurrection Nationale Slovaque" (6eme partie) 3 pages including 3 photos and 4 color side-view drawings. "Dornier 28D l'Adac de la Luftwaffe" (3eme partie) 5 pages including 10 photos (one Greek) and 1/72-scale drawings of float version. "Les Aviateurs de Tintamarre" 5 pages including 16 photos. "La Saga des Potez 54: Les Potez 541/543, Variantes Roumaines a Moteurs en Etoile" 6 pages including 17 photos (4 of Romanian a/c) and 3 color side-view drawings. "Les Heinkel He-111H.16 de Fabrication Espagnole" (2eme partie) 6 pages including 14 photos and a two-page cutaway drawing. "Caproni Ca.73-Ca.74: Les Bombardiers aux Ailes Inversees" (2eme partie) 3 pages including 11 photos. "Le Cam Penze 1917-1918" (3eme partie) 6 pages including 15 photos. "L'Incident du Nomonhan (Mai-Septembre 1939): Une Guerre entre l'URSS et le Japon Passee Inapercue" (1ere partie) 5 pages including 13 photos, one map, and color cover painting. "P-51B, Macchi C.202, Yak-3, et Fw 190 A-8 Nachtjager Maquettes Hasegawa au 1/72eme" 3 pages including 14 photos of models.

#44 Nov. 96 (52 pages) "La Militarisation de l'Aviation Civile Italienne durant la Seconde Guerre Mondiale" (2eme partie) 5 pages including 17 photos. "L'Incident du Momonhan" (2eme partie) 4 pages including 6 photos and 2 color side-view drawings (Soviet I-16 & I-153). "Les As de l'Aviation Militaire Francaise en 1914-1918: Jaques Roques" (1ere partie) 4 pages including 12 photos and 3 color side-view drawings (Ni-11, Ni-17, & Spad 7). "Les Trimoteurs Marcel Bloch (1930-1943)" (1ere partie) 3 pages including 9 photos. "Les Heinkel He-111H.16 de Fabrication Espagnole" (3eme partie) 4 pages including 12 photos and 2 color side-view drawings. "1940-1941: L'Aviation Grecque au Combat" (1ere partie) 7 pages including 13 photos (Breguet XIX, Hawker Horsley, Gloster Mars, Avro 504N, MS-230, Avro 621 Tutor, Avro 626, Fairey Battle, & Potez 25), color cover painting, 2-page cutaway drawing (PZL P-24F/G), & order of battle. "Carponi Ca.73-Ca.74" (3eme partie) 5 pages including 20 photos. "Les Aviateurs de Tintamarre" (2eme partie) 4 pages including 14 photos and a map [Editor's note: I still don't know where Tintamarre is.] "L'Avia B-534 (7eme partie): Au Service de la Luftwaffe" 6 pages including 14 photos, 2 pages of scale drawings, and a color side-view drawing. "Messerschmitt 110 G-4 au 1/48eme" 4 pages including 7 photos of model.

GREECE

NEA (IPMS-Greece, PO Box 79167, 175 05 Amfithea, Athens) 4 issues \$25.00 for first year, \$20.00 for next year. Includes English summary. [Back issues are available from IPMS-Greece.]

3/95 (48 pages) "Mirage F1CG: 20 Years in the Hellenic Air Force" 30 pages including 14 color photos (7 of details), 17 b&w photos, and 4 color side-view drawings. "Spanish Civil War Air Forces" (Part 3) 5 pages including 5 photos. 1/96 (32 pages) "Naval Helicopter Command" 5 pages including color photos and 3 b&w photos (Alouette III, AB-212SW/EW, & S-70B-6 Aegean Hawk). "Aerosan" 4 pages on Soviet air sleds including 2 pages of 1/35-scale drawings. "301 Base Workshop" 5 pages including 4 color and 12 b&w photos of some usual ground equipment including a "Mercedes-chassis vehicle for cesspool cleaning". **NEA Special Edition** (32 pages) Celebrating the 15th anniversary of IPMS-HELLAS. "The Presidential Guard Evzones' Uniform" 6 pages including 10 color photos. "The Harvard & Texan in the Hellenic Air Force" 6 pages including 6 photos, 3 color side-view drawings, and table of a/c used. "Hellenic Air Force Insignia" 8 pages including 9 b&w photos (Farman, Hs 126, Breguet 14 & 19, Bristol F2B, Baltimore, & Spitfire), 5 color photos (F-4, F-5, T-33, F-84F, & Bell UH-1), and 2 color chips for the two tones of blue used for the Greek roundel. "Hellenic Aircraft 1912-1995" a 3-page table. "Aces of the Diaspora" 3 pages including 3 photos.

ITALY

IL NOTIZIARIO (IPMS Italy, CP 182, 41100 Modena Ferrovia; one year 50,000 Italian Lira in Europe or US \$50.00 overseas).

1-1996 (32 pages) "Aerei Francesi nella Regia Aeronautica" 5 pages including 2 photos and 5 side-view drawings (LeO 431, Potez 63.1 & 63.11, Bre 695, and MS 460). "Un Dewoitine nella Regia Aeronautica" 2 pages with 2 photos of model. "Ansaldo SVA 5" 4 pages including 3 photos of Italian a/c and drawings of a wing-alignment jig.

2-1996 (32 pages) "Fiat CR 25" 9 pages including 3 photos of a/c, 9 photos of model, 1/72-scale 3-view drawing, 2 side-view drawings, and sketches of cockpit interior. "Fiat G.46" 4 pages including one photo, 10 side-view drawings (Argentina, Syria, & Austria), and 4-view drawing of a restored a/c. "Armoured Dozer" 4 pages including 5 photos (2 of model), 1/76-scale 4-view drawing, and sketches of model construction. "Dispositivi Antisabbia" 2 pages including 2 photos of C.202. "A Proposito dei Numeri Scorsi" 2 pages with 2 photos of Yugoslav Hurricane and 4 photos of French D.520 in Italian markings.

ITALY

JP-4 (JP-4, CP 1550, 50100 Firenze; L 27.000 Europe, L 30.000 elsewhere).

#8 Agosto 1996 (100 pages) Color photos: Chinese Il-14 'B-4208' Mao's personal a/c; Bolivian T-33 (2); Hungarian An-26 '609'; Slovak L-410 '2311'; and Egyptian Su-20, MiG-17, & MiG-21 display a/c. "Gli Artiglieri della Clemenceau" 6 pages including 14 color photos. "40 Anni di Crescita" 5 pages including 11 color photos (Italian Harriers, AB-212, & SH-3). "Chi Volava Vale" 6 pages on the a/c flown by Italo Balbo including 10 photos.

#10 Ottobre 1996 (100 pages) Color photos: Slov Air Transport LET 410 'OM-ODQ', Lithuanian Airlines B.737/200, Armenian Airlines Il-86, RNethAF KC-10D 'T-235' & Gulfstream IV 'V-11', Serbian Orao '25606', & Israeli CH-53 '044'.

B&W photos: Saudi and Abu Dhabi Hunters. #11 Novembre 1996 (100 pages) Color photos: Russian Be-12 & Tu-142, Greek S-70B, Dutch PC-7, and Omani Hawk '101'. "Una 'Prima' per la Pace" 4 pages including 8 photos (Romanian AN-30 & Puma, Belgian C-130H, Polish W-3RM Anakonda & MiG-29, and Hungarian Mi-8).

PARAGUAY

MODELO TERAPIA (Antonio Luis Sapienza, PO Box 2721, Asuncion, Paraguay. Quarterly. \$3.50 each via air mail).

Septiembre 1996 (14 pages) "El Vultee BT-13 Valiant en Paraguay" 3 pages including 3 side-view drawings. "El DeHaviland DHC-2 Beaver en Colombia" 4 pages including 4 multiview drawings. "El Grumman S-2E/T Turbo-Tracker de la Aviacion Naval Argentina" 3 pages including 4 side-view drawings. "El North American T-28D Trojan el la Fuerza Aerea Ecuatoriana" 2 pages including 3-view drawing.

URUGUAY

The now defunct *Air Forces Research* was put out by the same company as *Air Forces Monthly*, but was subscription only and was not available at normal magazine retailers. 24 pages per issue, all B&W except for the colour covers. Very detailed, with lots of number/id data for the numbers nut. *Air Forces Research* Subscription Department, Key Publishing Ltd, P.O. Box 100, Stamford, Lincolnshire, PE9 1XQ, England, Great Britain. Binders and back issues may possibly still be available.

Issue 1, April 1995. Colour photo: Finnish Hawk. Military news. S-3 Viking, including serial list. Finnish AF, 1965 to the present, with serial, c/n, delivery date, fate, and notes. Polish MiG-21's, with serials. Export Hawks, including serials and an explanation of the various numbering systems in use on this aircraft. B-52's at Davis Monthan.

Issue 2, May 1995. Colour: Austrian Draken, and Russian MiG's. News. Polish MiG-21 part 2, including close-up photos of 3 different recon pods. Argentine Army Hueys. Russian Foxbats in Germany. Korean museum. Austrian AF, including serial, c/n, delivery data for all aircraft in use since the AF was reformed in 1955. Amendments and updates to Issue 1.

Issue 3, June 1995. Colour: Thai Tr-28 and F-5E, Polish MiG-21, Hungarian MiG-21UM. News. Military Surplus, listing aircraft retirements and sales. Polish MiG-21 part 3. French Gendarmerie air units and aircraft. Thai historical flight and its aircraft. The MiG-21 Mongol trainer. Amendments.

Issue 4, July 1995. Colour French Mirage IV, Norwegian Sea Kings, Italian Guardia di Finanza P.166, battered Turkish RF-84F. News. Ex Homelands aircraft in the SAAF. Turkish recon jets: RT-33A, RF-84F, RF-5A, RF-4E. British-built export Sea Kings. Piaggio P.166. Chateaudun, France.

Issue 5, August 1995. Colour: Jordanian F-5E and Royal Flight DH Dove, USMC AV-8B, South African registered Hunter warbird. News. Jordanian AF from its early days, with lots of serial data including good coverage of their Hunters. AV-8B. Paris Air Show listing.

Issue 6, September 1995. Colour: Belgian SF-260 and Alpha Jet. News. Military Surplus. Soviet Su-24 in Germany. Jordanian Starfighters. Belgian AF update. Last Yaks in Germany. Angelholm open day listing and photos, including F10 wing badges.

A Escala, Bolentin Informativo IPMS Uruguay. #No. 7 Enero-Marzo 1996 (20 pages) "Fragata Montevideo" 6 pages including 2 pages of scale drawings. "El Fokker F-27 en la FAU" 4 pages including 3 pages of scale drawings and a color drawing of squadron badge. "Blindados en Uruguay" 4 pages including a page of drawings of Uruguayan Chafees.

USA

WWI AERO (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues \$30.00 USA or \$30 overseas).

#154 Nov 1996 (148 pages) "The Aero Club of America and Army Aviation 1907-1916: Part I" 6 pages. "Stashtik Dreadnought No 1" 4 pages on early Czech twin-engine (in tandem) bomber including two photos. "Royal Aircraft Factory RE-8: Part III" 6 pages including 7 photos and 7 excellent sketches. "Fokkers: D.VIIs, DR.Is" 6 pages including 18 photos. "Fokker D.*VIIs" 2-page list of extant original and reproductions with 6 photos. "Synchronizers: Part VI" 17 pages with photos and drawings. "BFW N.I." 3 pages with 3-view drawing and 4 photos of this single-engine, triplane night

Special Abstracts

Issue 7, October 1995. Colour: Pakistan Hercules, Philippines F-86. News. Philippine museums, listing aircraft. Belgian Army moves. Hercules block numbers. SAAF, including a great close-up photo of the new Eagle insignia of which there seems to be at least three varieties. RAF Lakenheath (US base) 1960-71, including aircraft list.

Issue 8, November 1995. Colour: Polish MiG-17, Spanish Starfighters, Bulgarian Mi-17. News. Bulgarian update. Military Surplus. Polish built MiG-17 part 1. Hercules block numbers. Spanish Starfighters.

Issue 9, December 1995. Colour: Lithuanian L-39, derelict US Phantom, Polish MiG-17, Ukrainian An-72. News. Bulgarian L-39; Plovdiv Museum: MiG-17PF, MiG-19, MiG-21, MiG-21US, Yak-23. US derelicts. Polish MiG-17, part 2, with 9 photos. Lithuanian AF, including history and a/c details. L-39, An-2, Let 410, Mi-8 photos. Ukraine Update, Su-27, MiG-29, An-26, SU-25 trainer.

Issue 10, January 1996. Colour: Indian An-12, French Alouette III, Ukraine MiG-29, Croat MiG-21. News. Greek F-102A going to the Netherlands. Czech MiG-29. Saudi PC-9. Spanish CASA 101. An-12, mostly USSR, but Ukraine, Indian (2), Iraqi, Egyptian, Yugoslavian, Sri Lankan, Algerian, Ethiopian. French Army. Lithuanian AF, An-2 with a close-up of the tiger badge on the fuselage, An-24, Mi-8, and a Police Ka-26. Croatian AF (13). Ghana Islander fuselage.

Issue 11, February 1996. Colour: Portuguese A-7, IFOR Lynx. News. Polish MiG-21. Portuguese AF Update (9), including the strangely camouflaged Orion with a dark 'stripe' down the fuselage, serial lists. French Army, part 2, including an all-white UN Gazelle. Soviet 16th Air Army.

Issue 12, March 1996. Colour: Albanian MiG-15UTI/FT-2 number 3-38 in red, red/black/red roundel on the fin, no upper wing or fuselage insignia, dark green wing walks. Spanish Do-27. News. RAAF MB-326, US Army IFOR AH-1F Cobra. Albanian AF, 2 pages. Combat a/c appear to have the roundel on the fin but not on the fuselage; trainers and helos only on the fuselage. No sign of any wing markings top or bottom, but some appear to have had wing markings in the past. Do-27 in Spain, 11 photos including SAR a/c. French Army lists. 16th Air Army.

Issue 13, April 1996. Colour: Portuguese G-91,

bomber. "Cockpits/Instruments" 7 pages with photos and drawings. "Propellers" 11 pages with photos and drawings.

SKYWAYS (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues \$30.00 USA or \$30.00 overseas).

#40 Oct. 1996 (84 pages) "Consolidated Commodore" 25 pages on the NYRBA and PanAm use of the Commodore including 23 photos, color cover painting, 3-view drawing, and table of individual a/c. "Scratch Building Model Flying Boats" 4 pages including 4 photos. "In Search of Grover Loening's First Air Yachts" 9 pages including 12 photos (civil, Canadian, and Army Air Service). "One-Off Stinson: The Saga of the SM-4" 4 pages on this ill-fated record-breaker including 6 photos. "Anacostia Flight Tests: The Hall-Aluminum XPTBH-2 Patrol Torpedo Bomber" 9 pages including 12 photos and 3-view drawing. "Early P-38 Problems" 11-page summary of Lockheed report including 10 photos. "ID UNK", "Reproductions and Restorations". and "From the Members" adds 13 photos and one 3-view drawing.

Polish Mi-2, Uruguayan Tracker. News. Albanian Il-14. Sri Lankan Kfir trainer. Uruguayan Navy (11) including Hellicats, Kingfisher, and a/c serial lists. Portuguese G-91 (8, plus 7 badges). Polish Update (16). US Customs AEW Orion. Su-15 Flagon. Chilean Navy Cougar. Uruguayan AF C-130B.

Issue 13 was followed by a letter to say that the magazine was changing to bi-monthly from the next issue, with more pages per issue. A further letter followed to say that the large increases in paper prices meant that the magazine was folding, but that some of its features were to be incorporated in to *Air Forces Monthly*, with effect from AFM No.101, August 1996. Existing subscriptions would be changed over to AFM instead.

Paul Adams (SAFCH #773), 81 Ponsonby Road, Ponsonby, Auckland 1, New Zealand.

Air World International (British). Modern and historical, military and civil. 100 pages per issue, including the covers. Good detailed coverage, the only real fault is that some of the photos are so small that it is hard to make out the details. Lots of British and US military, British civil register list, airliners, warbirds. Book, kit, and video reviews. *Air World International* Subscriptions Department, Castle House, 97 High Street, Colchester, Essex, CO1 1TH, England, Great Britain.

Issue 1, May 1995. Egyptian Hercules and 707. US Army Mi-8 and Mi-24 with Iraqi flag markings but no triangles. Israeli F-16's, 3 pages with 6 photos, 2 of them show full colour US insignia in 4 wing positions, and no fuselage insignia. Unit list. Soviet construction number details, including Czech MiG-29 (2). A visit to Polish airfield, various photos. Flight Plans: 3 pages of FW-190D drawings and one page of colour schemes (all Luftwaffe).

Issue 2, June 1995. West German Mi-24. Junkers F13 history. Flight Plans: DH-2, 3 pages. Hind article, East and West German, Polish, Czech (6), Hungary, use by the Warsaw Pact. Luftwaffe F-104. Issue 3, July 1995. Greek Albatross, Dakota article (6). United Arab Emirates Hawks. Brazilian 707. Spanish CASA 101 aerobatic team article (10). US Shooting Stars in Korea. Israeli AF museum: C-47, F-4E, Mirages, S-199, Skyhawk, Vautour, Super Mystere with US engine, KC-97, Magisters, Noratlas, derelict Spitfire and Ouragon. Iraqi Fury war-

bird. Slovak MiG-29. Flight Plans: Hawk trainer, 3 pages and 1 page of profiles including Swiss, Abu Dhabi, camouflaged Indonesian.

Issue 4, August 1995. Austrian Drakens in Britain, with very large dayglo orange serial numbers above the wings, first figure of the two-figure serial to port, and the second figure to starboard. British UN Chinook. Canadian CP-140A. Slovak AF, MiG-21, MiG-29 (2), Su-25 special with the girl on a buffalo/bison, Mi-8 (3) the placement of the national insignia on these various depending on what electronic fittings are carried on the fuselage sides, Mi-24, civil Zlin 142 used for pilot training. Czech and Slovak Su-22, with serial list and 6 photos all Czech. Shooting Stars in Korea, part 2. Swiss aerobatic F-5E. Flight Plans, Mitsubishi Zero, 4 pages.

Issue 5, September 1995. Tu-134 in UN marks. Czech AF: MiG-21 special, MiG-23 (2) including a low-viz Tiger scheme, MiG-29, Su-22, Su-25, Mi-2 in red/white SAR scheme, Mi-24, An-30 with Open Skies markings, Zlin 142. European Phantoms: German (5), Spanish (2), Greek (2), Turkish. Italian Piaggio P.166 of the Guardia di Finanza. Spanish Sikorsky S-76. 406 Sqn RCAF in WW2. Flight Plans: Hawker Hind showing various engines, 2 pages, 1 page of profiles including Swiss civil, Persian, Latvian.

Issue 6, October 1995. Saudi Tornado GR.1. British Gazelle, Lynx, and Chinook in partial UN markings (black letters in a white square over the regular finish. Swiss Hawk, Hunter (2), fighter and aerobatic F-5E's. Kuwaiti Police Gazelle in either white or light grey with dayglo patches, POLICE title and national flag on the tail boom. Turkish KC-135R. Slovak MiG-29. Czech Su-22, Mi-24. Polish TS-11 Iskra. Finnish Hawk. Swedish Viggen. The Czech AF at the time of Munich (10). Mushshaks in Pakistan (7). US Warbird L-8 in Bolivian markings. Greek Grumman Ag-Cat top dressing aircraft, flown by the AF in Greece ! Italian Starfighters (8 all B&W), Flight Plans: Northrop F-5A/B/C, 3 pages and one of profiles.

Issue 7, November 1995. RAF Chinook in all-white UN markings, but still with RAF roundels (2). Belgian F-16, Alpha Jet special. Spanish EF-18. Light grey German Tornado. Italian POLIZIA and VIGILI DEL FUOCO Jet Rangers. F8F Bearcat article, one US civil a/c in Thai markings, rest US. RAAF Mosquito line-up. RNZAF Museum at Wigram. The Skyhawk, NZ6207 is actually an ex-USN A-4L modified to resemble an RNZAF A-4K, as NZ6207 crashed in 1974. UN in Yugoslavia, Il-76, Mi-26, Mi-8, An-26, Gazelle. Airspeed Envoy in India (4). Draken (6), list of J-35J conversions. Turkish F-4 and tiger-striped Slovak MiG-29.

Issue 8, December 1995. Gripen two-seater (3). Dutch and Norwegian F-16. Spanish AF in Bosnia. Walrus, 8 pages, including NZ and Aust a/c. Greek Phantoms (7), including an F-4E with a small Greek flag on the lower starboard air intake, just forward of the roundel. Helicopters in Sierra Leone, including the Mi-24 serialised AF-0010. The only insignia visible is a swept back fin flash of light green, white, and light blue. Colours are sand and medium green, over light blue. Slovak aerobatic team L-39 (4). Portuguese A-7 showing the upper surface camo pattern and lack of wing insignia. Czech MiG-29.

Issue 9, January 1996. RN Sea King in UN markings. Australian Army CH-47D. German Navy Skyservant. The Schneider Trophy Part 1, lots of photos. Spanish Harriers (4). British Air Transport Auxiliary. A very useful article on foreign unit titles of WW2 and their English equivalents including approximate size, 3 pages. Russian MiG-AT and Yak-130 trainers. NZ Fighter Pilots Museum at Wanaka.

Issue 10, February 1996. Italian F-104, AMX special and RF-84F gate guardian. Bulgarian L-29, MiG-15UTI, MiG-17, and MiG-19 museum a/c, all wearing tri-colour roundels. British Gazelle in UN markings and an all-white, TOW-armed Lynx. US Treasury Department OV-10 Broncos. SAAF 75th Anniversary Air Show. Dutch F-27 display a/c (6). Foreign unit titles of WW2, part 2. Canadian Buffalo and CH-146.

Issue 11, March 1996. Dutch Chinook. Gripen. Ex-Swiss Hunter. SAAF Puma. Belgian C-130, Magister. Russians in Angola, 6 pages including SAAF helos and Angolan Mi-17 and MiG-21. Czech Hind display team.

Issue 12, April 1996. German MiG-29. Belgian and Portuguese F-16. Spanish Mirage III, F1, Phantom, F-5B, Orion, Do 27, Sikorsky S-76. Polish MiG-21, 3 pages, 9 photos. US A-10 over Sarajevo. Czech aerospace: L-39, low-viz tiger striped MiG-23.

Vol 2, No 1, May 1996 (note the change in numbering). Italian Starfighters go grey. Belgian F-16B. IFOR, British helos in Bosnia (5 pages). French Atlantique. White Russian Campaign of 1919, 12 photos, all British. Reconnaissance Etendards.

Vol 2, No 2, June 1996. Dutch display F-27. Portuguese Alpha Jet in the new green/green/tan scheme; and 3 pages on the F-16. RAF Chinook HC.2 details. Uruguayan museum: Tracker, Potez 25, F-80C, A-37, and several trainers. Dutch transports, all-white F-27, KDC-10 (2), Hercules. Vol 2, No 3, July 1996. Norwegian Sea King with four Dayglo (?) stripes below the fuselage. German Tornado. Italian UN Iroquois in Lebanon. Portuguese G-91, including serials. Kbely, Czech museum, 4 pages, including a North Vietnamese F-5E.

Vol 2, No 4, August 1996. Portuguese F-16. Tiger Meet specials, 3 pages. Six pages on El Salvador: UH-1, Hughes 500, Cessna O-2A. Luftwaffe Mi-8 and Eurofighter. Norwegian F-16, 3 pages, 6 photos, serial list. The long running Schneider Trophy series is now up to part 8, but has only reached 1925, so it has a while to go yet.

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Air Power International (British), modern military aviation. All colour photos, many of SAF interest. Good coverage of anniversary schemes and other specials. Originally published monthly, this changed to bi-monthly with effect from No.20. Subscriptions are £16.20 for Britain, and £21.00 overseas surface mail or £25.00 airmail, for just over one year/7 issues. Enterprise Aviation Publishing, 42 Claygate Road, London, W13 9XG, England, Great Britain. Back issues are available at £3.00 each in Britain, or £3.50 each overseas, including postage.

Issue 6, February 1995. All black Canadian T-33; CF-18 with D-Day stripes and black/white/black maple leaf roundel; CF-18 with a white fin and half a maple leaf (2); CC-150 Polaris with a small UN flag on the fin below the serial and fin flash; Snowbirds formation. Dutch F-16A, J-360 with a soccer ball and red/white/blue stripes on the fin. Egyptian F-4E with low-viz US insignia. Italian retirement of the Fiat G.91, two special schemes. Pakistan AF Mushshak trainer. Spanish F-18. Ukrainian Il-76. Slovak An-12. Republic of Singapore article: Black Knights Skyhawks; F-16 with black lion head roundel on the aft fuselage; F-5E with what appears to be a medium grey lion head roundel; the RF-5E in the same shot has a much darker roundel, either black or very dark grey; Skyhawks with black roundels; E-2 Hawkeye with black fuselage and lower starboard wing roundels; S.211 trainers with

red/white roundels thinly outlined in white; Fokker 50 transport 712 in two tone grey camouflage with black fuselage roundels, these are also worn beneath both wings with the lion facing outward on each side.

Issue 7, March 1995. Austrian Saab 105 in low-viz Tiger stripes. Argentine F-28 Fellowship. Chilean Mirage 5. Turkish F-4E. Low-viz Indonesian CN.235 with black pentagon on the rear fuselage (is there some other marking inside this ?). Swiss Hunter article (12), mostly special or aerobatic schemes. Bolivian article: T-33, C-130, Fokker F-27, Aviocar, Arava 201, the national markings appear to be restricted to the red/yellow/green national flag on the fin, and an FAB title by the serial number. Also a Navy Cessna 402 with rudder stripes, a very complex design of a wreath and small red stars on the fin; there is no insignia below the port wing only the serial, AB-102. Aero L-39 article: Czech; Slovak L-29 and L-39; Hungary; Nigeria; Egypt. Turkish Phantoms (5), various schemes, plus a T-33 and C-47.

Issue 8, April 1995. Dutch F-16 with red/white checks on the fin and strakes. Irish CN.235. Spanish Falcon 20; Aviocar. Greek Mirage F1. Malaysian F-5E and A-4. Hungarian MiG-29. Brazilian F-5E with refuelling probe on the starboard side; S-2 Tracker. Puerto Rico ANG F-16's in Chile, with F-5 and Hunter. Qatar article: Mirage F1 (2); Alpha Jet; Gazelle; and Sea King (2). These are very similar to photos in other magazines of these aircraft. Luftwaffe Phantoms (6), most with coloured trim. Greek F-4E. Hungarian article: MiG-21 (5) and MiG-23 (5).

Issue 9, May 1995. Chinese Ching Kuo fighter. Portuguese Falcon 50. Ecuadorian AF: Mirage F1, Jaguar, Kfir, Strikemaster, Canberra, T-33, HS 748, T-34C. Monte Real base in Portugal: F-16 (4); A-7 and TA-7, Cessna FTB.337. South Africa including the castle insignia with a gold eagle in place of the old Springbok. Thai F-16, Albatros (both with very small insignia), C-123K, Chinook, and a Navy CL-215.

Issue 10, June 1995. US Army F-100 Super Sabre drone. Chilean Mirage V. Turkish NF-5A aerobatic aircraft, overall white with a red fin on which is a large white crescent moon and star. Swiss aerobatic F-5E (3). Canadian article, CF-18, Boeing 707 with small UN flag under the serial and fin flash, the D-Day stripped CF-18, RF-5A, low-viz Challenger, Hercules, and an Airbus/CC-150 Polaris, also with a small UN flag, T-33, Buffalo, CH-113A, UH-1, 412HP, and a listing of units. Spanish Mirage F1 (6). South African air show: Cheetah with low-viz Eagle insignia, Mirage IIICZ in a special 75th Anniversary scheme, Anniversary Hercules; Mirage F1, Boeing 707 tanker, Impala specials (2), CASA 212, PC-7, and a Harvard.

Issue 11, July 1995. Italian F-104 in a special scheme with different markings on each side of the fuselage. Belgian Alpha Jet in 7 Sqn anniversary colours, including vertical black/yellow/red fin tip stripes. Japanese Neptune. Turkish AF article, F-4E (2), F-16, F-5A target tug, NF-5A, C-47, CN-235 (2), T-38, and UH-1H with what appears to be a roundel just visible under the cockpit. German Phantom article (8).

Issue 12, August 1995. South Africa Cheetah painted in cheetah markings. Czech MiG-21's. Belgian Falcon 900. Singapore Hercules with black double-fish insignia on the fuselage and beneath the starboard wing, there also appears to be something (a serial ?) beneath the port wing, but this is partly hidden. Chilean AEW 707 in overall light grey with a white star on its grey rudder. Austrian Drakens (4) with either Sidewinders or finless acquisition rounds. Jordanian AF: Mirage F1 (3),

F-5E, Super Puma, CASA 101, C-130H, CASA 212, Hughes 500D (2), Bulldog whose only markings are a flag on the fin and an Arabic serial, AH-1F Cobra. Greek Navy article: Alouette III and AB212, the latter has blue/white/blue roundels, thinly outlined in white, above its horizontal stabilizers. The Alouette does not have any upper surfaces markings. The under sides are not visible so I do not know what markings, if any, are worn in this position. The AB 212 also has a white naval anchor on a blue circle on its engine housing. Zimbabwe AF air show: F-7M/MiG-21 (3), SF-260, AB 412, CASA 212, Hunter, in a mix of old (bird) and new (white/black/red/yellow/light green roundel and national flag fin flash) markings, with AIR FORCE OF ZIMBABWE titles. The bird appears to have been confined to the fin or sometimes the tail boom, while roundels are worn on the front or rear fuselage and below both wings (what about above?). The flag is used as a fin flash, but some aircraft have the bird rather than a flag, presumably these mixed markings are just a short lived anomaly during the change over period? Dutch F-16 specials (2). Belgian Magister special. Swiss aerobatic F-5E.

Issue 13, September 1995. Canadian CF-18 with a 410 Sqn Cougar jumping through a V for Victory on the fin. Belgian SF-260 specials (2). Turkish KC-135R, F-5B. Swiss Mirage III upgrades (3) and F-5 (3). Polish MiG-29, Iskra aerobatic team. Austrian article: Draken (3), Saab 105 (2, one of them in a mix of high and low viz Tiger stripes), Skyvan, AB 204 (2), PC-7, Kiowas, Alouette III, AB 212. Norwegian F-5A with front half Tiger striped. German Alpha Jet special. South African AF Boeing 707 with the new, letter Y shaped national

flag on the fin. Czech Su-22 team, Mi-24, MiG-21 special. Slovak MiG-29. Finnish Hawk. Saudi Tornado GR.1. Swedish Viggen.

Issue 14, October 1995. Dutch KDC-10 tanker, with the fuselage roundel on the fin mounted engine, as per the US KC-10. Canadian Boeing 707. Spanish RF-4C with refuelling probe. German Tornados in overall light grey for Bosnia (5). AMX of 2 Stormo (5). Spanish Navy AV-8S, TAV-8S, EAV-8B, Cessna 550 Citation, Sea King, Hughes 500, AB.212, SH-60B with grey markings and really tiny roundels. Swedish open day, including a VIP Saab 340 with the Swedish flag on the tail, SVERIGE on the fuselage, and a blue/yellow/blue cheatline. Austrian Saab 105.

Issue 15, November 1995. Greek Mirage 2000BG. Gripen. Italian MB339 (6). F-104 (3), S.208, HH-3F (2). Some of these a/c wear the low-viz roundel with a narrow white ring, similar to the RAF Type C.

Issue 16, December 1995. Last German RF-4E in special markings. Thai F-16. Malaysian C-130. Last flight of the G-91T in Italy, 2 specials. Romania: MiG-21, MiG-23 (3), MiG-29, An-30, IAR-93, IAR-99, Coast Guard Puma in a special bird scheme. Bulgaria MiG-21, MiG-23, Tu-134, Mi-17, Navy Mi-14. Italian naval aviation: AV-8, AB.212 Atlantic, Sea King, Coast Guard P.166. German MiG-29, Dutch and Belgian F-16.

Issue 17, January 1996. Peruvian presidential Fokker F.28. Danish F-16 MLU with the flags of the five participants. Last flight of the SAAF Harvard. Uruguayan Navy: Tracker, Piper Seneca, T-34C, T-28, Wessex. South Africa, Cheetah, Boeing 707, Puma. Ukraine, MiG-29, MiG-23, Su-25 trainer, L-39, Mi-17 which appears to have a light blue and yellow roundel under the fuselage.

Recent Russian Books and Magazines.

KA-50: 112 pages, 151 photos (25 b/w photos), 22 drawings, 5 color side-view drawings.

CONSOLIDATED CATALINA FLYING BOAT: 36 pages, 25 photos. 11 drawings, 1 color side-view drawing.

AVIATION & TIME Nr.4 1996: 70 years of Kharkov State Aviation Production Enterprise. Yak-2, Yak-4, BB-22/22BIS. Afghanistan Hot Skies - Part VII; Invasion. Beginning of Soviet-German Front - Part II. An-8. National Guard Aviation of Ukraine. Vietnamese Impressions. In color: Yak-2, Yak-4; Mi-24A Afghanistan AF; Mi-24D Soviet AF. Ar-2. I-16 type 24/27; I-153: MiG-3; SB-2M-100; MiG-21UM. F-5. A-37 Vietnam AF. Supplement: drawings of: An-8; Yak-2, Yak-4, BB-22. 44 pages (8 color), 92 photos (6 color), 4 drawings, 13 color side-view drawings.

AEROPLAN Nr.10: SEA FURY plane & model. Amet-Han Sultan. Bombs & Missiles on Luftwaffe's Warplanes. Marking Su-25UB Frogfoot. External Stores of Su-25. Helicopter Mi-24HR. Dimensions of Soviet Aircraft. Curtiss P-40. B17 of Luftwaffe. Il-2 Model. 40 pages (4 color). 47 photos (7 color). 42 drawings (Sea Fury, Su-25UB, Mi24HR, P-40).

AEROPLAN Nr.II: Northrop F-5 Plane & Model. Bombs & Missiles of Luftwaffe's Warplanes. MiG-21-93. Back to the Future. Vickers Wellington. Eino Ilmarinen Jutilainen. Morane Saulnier I. Soviet Colors and Camouflage. 40 pages, (6 color), 37 photos (15 color), 39 drawings (F-5A/B/C/D/E, CF-5A, Wellington).

AEROPLAN Nr.12" Vladimir Orekhov. Il-4 Plane & Model. Bombs & Missiles on Soviet Warplanes. "YAX" - as in actor. Il-2. Red Army Air Force 1941-1945. LaGG-3. 40 pages (7 color), 82 photos (9 color), 37 drawings (DB-3P, LaGG-3), 9 color

side-view drawings (Il-2, Yak-7, LaSFN, La-7, TP-39P Airacobra, Hurricane Mk.IIB, Spitfire Mk.XI - all in USSR marking).

AEROPLAN Nr.13: ANT-25, Soviet Air Force 1941-1945. British WWII Bombs. Su-17M3. K-36L Ejection Seat. Pierre Closterman and his Tempest. Models of the "Su" Family. Supplement: drawings of ANT-25 (1/72) & Bf-109F (1/48). 40 pages (4 color), 71 photos, 11 drawings. 9 color side-view drawings.

AVIAFAN: P-36, H-75, Hs-129, F-86, F-5, UH-1. 56 pages (4 color), 12 pages of drawings.

WINGS OVER SEA: Soviet shipboard reconnaissance aircraft: KR-1, I-15M, KOR-1/2/2L/3. Spitfire. Ka-8 helicopter description, drawings, modifications & photos. Tupolev Tu-91 description, drawings, modifications & photos. History of Yakovlev's VTOL aircraft Yak-36/36M/U, Yak-38/M, Yak-141 description, drawings, modifications & photos. Ship aircraft and air-capable ships of the Russian Navy. First landing on the heavy air-capable cruiser "Tbilisi". In color: cruiser "Tbilisi", Yak-38, Su-25UTG, Su-27K(T-10K-2/3/4), MiG-29K, Ka-25/PS, Ka-27PS. 74 pages (10 color), 80 photos (6 color), Su-27K(T-10K-6) drawings 1:48, 33 drawings Su-34: 56 pages, 106 color photos, 5 pages drawings. KRILIA RODINY Nr.2 1994: SB-2. Me-262. Fw-200C-4. Mistel 1/2/3B/3C/SI/S3A. F-82B/G/E, DH-88, VB-10, & Ki-64. Zeppelin Staaken R.IV/VI/XIV. Autogiro A-7. AK. U-2, U-2R, & TR-1. Fokker Dr.I. Albatros D.V. Fw-187A-0. Il-78. Su-27UB/IB. 48 pages, (4 color). 40 photos (7 color), 36 drawings.

KRILIA RODINY Nr.9 1994: Aircraft-target La-17. Ki-61. Gloster Javelin. CF-100. DH Hornet. F-80. Konyek Gorbunok. SPAD. Gloster Meteor F4. Ju-88. Short Sterling. I-7. Su-27/27UB. Su-24.

Issue 18, February 1996. Chinese C-119 and Beech 1900. Canadian low-viz Dash 8. Slovak MiG-29. G-91 profile, nice photos. Mostly US aircraft this issue.

Issue 19, March 1996. NATO E-3. Malaysian MiG-29. Dutch Chinook. Brazilian AMX, F-5E, F-5F, Mirage III. Tornado F.3, mostly RAF, but one each Saudi and Italian.

Issue 20, April/May 1996 (first bi-monthly issue). Thai Navy TA-7. Czech An-24, Chinese AT-3. Portuguese F-16, German MiG-29, Greek F-16D. Peruvian Canberras, 3 photos in either a desert or PRU blue camouflage.

Issue 21, June/July 1996. Belgian F-16. Dutch F-27. Brazilian Navy, including naval support types flown by the AF. Tracker, Sea King, Super Puma, Lynx, Squirrel (2), Jet Ranger. Hawker Hunters in Singapore (4 photos), including a list of serials. The Mk 74B is still being listed with an FR prefix, which is not applicable. One FR aircraft has a Sidewinder missile pylon just outboard of the air intake.

Issue 22, August/September 1996. Canadian CF-18 with a giant maple leaf atop the fuselage. CT-114 special. Austrian Turbo Porter special. Dutch Cougar and Chinook. Tacit Blue. Malaysian Fulcrums (4). These aircraft carry low-viz markings: no fin flashes, and the yellow sun in the centre of the square insignia is blank, allowing the light grey background colour to show through. Romania, MiG-21 (3) and Chinese-built Il-28 (2). NATO Tiger Meet specials. Finnish Hawk. Slovak MiG-29 (2), showing off the wing insignia.

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Su-30. Yak-142. Yak-112. Sea Hornet. 32 pages (8 color), 41 photos (12 color), 25 drawings.

SAMOLIOTY MIRA (AIRPLANES OF THE WORLD) 1995 Nr.1: Experimental Soviet Bomber "140" & "150" (1949 & 1951); Experimental Soviet Aircraft "346" (1948). Passenger Aircraft "152" (East Germany 1954). Yak-1. Wellington. 32 pages (8 color), 78 photos (10 color - MiG-25/31, Tu-16/22, Su-27/27IB, Il-78). 12 drawings.

LOADSTAR. VENTURA. HARPOON: 48 pages. 68 b/w photos, 37 drawings, 28 color side-view drawings.

VESTNIK VOZDUSHNOGO FLOTA (Air Fleet Bulletin) Nr.2 1995: Tu-160. DB-2. Su-2/6/7/9/11 (1947)

/11(1956)/25/26/27IB/29/30/33/35/100. New - Su-34, L-39, Mi-8, A-50, MiG-29. 64 pages (full color), 114 color photos, (11 b/w), 8 drawings, 2 color side-view drawings. Poster Su-34.

VESTNIK VOZDUSHNOGO FLOTA (Air Fleet Bulletin) Nr.5-6 1995. Annotated articles in English: Kamov + Agusta = Ka-64. A forge of Russian miracles- Leningrad North Plant. Russian aerobatic aircraft Su-26, Su-29, Su-31, Yak-54, Yak-55. Thermoplane "flying saucer" from ... MAI - "Khuk", "Kobra", "Kolokol", "Pugachev Kobra", "Herbst Turn", "Sterkh", "Sokol", and other unmanned vehicles. Kachinsk High Military Pilot School. "Admiral Kuznetsov" heavy aircraft carrier. Tornado over Bosnia. Russian Air Forces fighters in the sky of South Africa. Archives: I-190, SB, Ar-2, I-15, Il-40. Winged sniper - I-16. Accidents. News. Full color. 96 pages, 157 photos (17 b/w), 11 drawings, 2 color side-view drawings.

Arnis Draugs (SAFCH #1229), Sarkanduogavas 26-4-250, Riga LV-1005, Latvia.

PHILIPPINE ARMY AIR CORPS, 1935 TO 1942

Leif Hellström

Since it was a US colony up to 1947, the history of the pre-war military aviation in the Philippines is by necessity closely linked to America in many ways. The first attempt to set up a Philippine-crewed air unit took place on 19 March 1917, when the creation of an Aviation Section of the Philippine Militia (soon renamed National Guard) was approved by the Governor-General. The first unit, known as the 3rd Aero Squadron, was finally set up in 1919, but was disbanded the same year before any aircraft were received.

In 1920, 25 Filipino military pilots, including many previously with the National Guard, were graduated by a flying school established near Manila by the Curtiss Aeroplane Company. The first Filipino to go solo was Lt Leoncia Malinao, taking off in a JN-4 Jenny on 26 April 1920.

On 7 July 1920, the colonial government announced the establishment of the Philippine Air Service. The purpose of this organisation was to provide continued training to the Curtiss-trained pilots while at the same time carrying mail and passengers between Manila and provincial towns. The aircraft fleet consisted of three JN-4s, two Curtiss F-5Ls and three Curtiss HS-2Ls. The two latter types, which were both hydroplanes, arrived in January 1921. After barely starting operations, the organisation was dissolved for financial reasons in the autumn of 1921.

Several attempts to revive Philippine military aviation over the next dozen years or so all failed. Finally, in 1934, the Chief of the para-military Philippine Constabulary happened to read that the Royal Canadian Mounted Police had a small air unit, and it became something of an obsession of his to obtain one of his own. Later that year, the Governor General approved the appropriation of 519,000 Pesos to set up a unit with ten aircraft and ten pilots, and this was formally activated on 2 January 1935.

The PAAC is formed

The unit became known as the Philippine Constabulary Air Corps, and consisted of a Tactical Company (soon renamed the 1st School Company) and a Service Company (renamed the 2nd Service Company), with a total manpower of 116 men. The first year of existence was taken up by getting organised, and by building an airfield at Camp Murphy near Manila. While this was still going on, on 11 January 1936, the Philippine Constabulary was reorganised as the Philippine Army, and the Philippine Constabulary Air Corps (PCAC) became the Philippine Army Air Corps (PAAC).

Two officers had been sent to the USA in 1934 for pilot training, but one was soon sent home and the other, Major Porfirio Zablan - who had also been slated to take command of the PCAC - was killed in a crash in June 1935, five days before graduation. The airfield at Camp Murphy was later renamed Zablan Field in his memory. After the death of Zablan, 1/Lt William Lee, USAAC, was appointed Chief of the Air Corps. Meanwhile, in August 1935, the first three aircraft had been ordered. The aircraft type chosen as primary trainer was the Stearman 73L-3, similar to the Stearman NS trainer used by the US Navy. Delivered by ship, the first aircraft to be assembled and flown was serial number 36-2, on 2 May 1936. (The PCAC had its own serial number sequence, similar to that of the USAAC.) Stearmans 36-1 and -3 followed in short order, and in

June 1936 a Stinson SR-7B was purchased. Strictly speaking, however, the first PCAC/PAAC aircraft were two JN-4s (late of the Philippine Air Service) obtained as instructional airframes in mid 1935.

A further five Stearman 73L-3s were ordered in August 1936, together with three examples of another version: the Stearman 76D-1. These were immediately recognisable by their engine cowlings and partly glassed cockpit canopy. They were armed with three light machine guns and could carry small bombs.

In PAAC service, the Stearman 73 was designated Primary Trainer type 1 (PT-1), while the Stearman 76 was known as Basic Trainer type 1 (BT-1), again using a system copied from the USAAC. (Presumably the Stinson was designated C-1, although there is no proof of this.)

There is some confusion regarding one primary trainer, which was officially received by the PAAC on 17 November 1936. Donated by the Filipino community on Hawaii, it was named "Aloha" and this was written in white capitals on the fuselage under the rear cockpit. Although ostensibly a new aircraft, it seems almost certain that this was in fact one of the first three PAAC Stearman PT-1s.

The main purpose of the PAAC was to perform reconnaissance for the Army. It was, however, some time before any useful assistance could be given to the Army, since all initial efforts had to be directed at pilot training. The first instructors were all Americans. The first pilot, Cadet Andres Cruz, soloed on 14 June 1936, only one month and three days after the first course started at Camp Murphy. There were a total of seven classes in the first 12 months, graduating 13 pilots. A total of 1,869.35 hours was logged during the period. Some officers were also sent to the USA for advanced flight training, the first ones graduating in the autumn of 1936.

The seven new Stearmans were all assembled and tested during May 1937. One of these was used by a certain Lt Col Dwight D. Eisenhower, US Army, for his first solo flight on 19 May 1937. He was one of several officers on General MacArthur's staff who learned to fly with the PAAC. During his flight, a sand bag placed in the rear seat as ballast got loose and jammed the stick during a spin, and it was only with some considerable difficulty he regained control!

A second presentation aircraft, named the "Spirit of Cebu" was "given" to the PAAC on 19 June 1937. In reality, this was BT-137-9, which had already served with the PAAC for a month.

First operations

The first operational deployment of the PAAC took place in the first days of December 1937, when the three BT-1s and the Stinson flew to Lanao on the island of Mindanao. The purpose was to assist the ground troops in quelling a minor uprising by the local Moslem population. The Army had the situation under control by the time the aircraft arrived, and the formation returned to Manila after a few days.

Frequent minor accidents were par for the course in any air force during the 1930s, and the PAAC was no exception. All had been repairable, though. But on 30 January 1938, BT-1 number 11 was lost when it crashed into some trees in Baguio City, after its engine quit at low altitude. The pilot suffered minor injuries

but his passenger, MacArthur's Chief-of-Staff Colonel James Ord, was killed.

The year 1938 also saw the delivery of a further six BT-1s (this time Stearman 76D-3s rather than D-1s) and a final three PT-1s. To these was added the PAACs first twin-engined aircraft, a Beech 18D equipped for aerial photography as well as transport. This was followed by a second Beech during 1939.

By early 1939, the PAAC had 28 pilots, 5 non-rated officers and some 300 enlisted men. Captain Mark Lewis of the USAAC had taken over as Commanding Officer the previous year, only to be relieved by Lt.Col. Charles A. Backes in June 1940.

The most lethal aircraft in the PAAC inventory was still the BT-1, totally unsuitable for any sort of warfare except the suppression of poorly armed insurgents. Despite this, extensive manoeuvres with ten Stearmans held over various parts of the Philippines in February-March 1939 had been announced a success and resulted in orders for a further 18 armed Stearmans, intended to be stationed in the southern part of the country. These all arrived in the last quarter of 1939.

In March 1940, the PAAC finally received its first fighter aircraft, in the shape of the last two ZP-12Es of the USAAC on the Philippines, which had previously served with the Nichols Field Station Flight. Each of the aircraft had some 1,900 hours on the airframe and were bought "at a very low price." The "Z" in ZP-12E indicated that they had been classified as Obsolete by the USAAC. But although not modern by any standard, they were still "hot" when compared to the Stearmans. (They were, incidentally, far from being the last P-12Es in the USAAC and were outlived by 30-odd other aircraft in the Continental USA, the last of which survived in service until December 1942!)

The initial organisation of the PAAC had remained unchanged for the first few years, but a reorganisation in early 1940 (or possibly sometime in 1939: the sources are conflicting) resulted in the following set-up: 1st School Squadron; 2nd Service and Depot Squadron; 5th Photo Squadron; and 6th Observation Squadron.

The 5th Photo Squadron was set up in co-operation with the Corps of Engineers and the Bureau of Coast and Geodetic Survey, and was tasked with aerial mapping of the Philippines.

The 6th Observation Squadron, which was the first combat unit of the PAAC, moved to Clark Field for operational training. It was declared ready for operations on 20 April 1940. During its time at Clark, the unit was attached to the 28th Bombardment Squadron of the USAAC.

After a long, accident-free period, the PAAC lost two Stearmans in accidents during the first half of 1940: one on 28 March and the other on 21 May. The crew of the first bailed out safely after the aircraft lost a wing, but the pilot of the second, Lt. Eliseo B. Maniquis, was killed in the crash.

The old fighters were joined in October 1940 by an even older bomber, a Keystone ZB-3A with 2,878 hours on it. It was the last survivor of a dozen B-3As to have served in the Philippines during the 1930s, and was in fact the only one in the USAAC to make it into the 1940s. It had suffered some damage in a forced landing on 5 September 1940, but rather than being scrapped it was sold to the PAAC.

New bases, new aircraft

Zablan Field was no longer big enough to house all units of the increasingly large PAAC and it was decided to use it mainly for the Primary Training School. The PAAC therefore split the

1st School Squadron and formed a new unit, the 7th School Squadron, to support the Basic and Advanced Flying School. In October this unit moved to Clark Field. At the same time, 6th Observation moved out of Clark to its new home, Lahug Field: a 700 meter long airstrip outside Cebu City on Mindanao intended as a main base for the PAAC in the south.

During 1940 work had also commenced on two further air bases. The third one, later named Maniquis Field, was being prepared at Nueva Icija, Cabanatuan. The 8th Air Base Squadron was formed at Zablan in late 1940, in preparation for moving to Maniquis. The fourth base, Batangas Field, was being built near the coast some 100 km south of Manila.

By the end of 1940, the PAAC had 40 rated pilots. A hundred more were to be added in 1941. This remarkable increase was due to greatly accelerated efforts by the Americans to strengthen the defence of the islands. The advanced training was now carried out at Maniquis Field, where the 7th School Squadron and 8th Air Base Squadron had moved once the airstrip was completed in February 1941. The training courses had been shortened to process more people and in May 1941 it was announced that plans existed to train as many as 500 pilots a year.

At some point in 1941, probably during the spring, the PAAC received a dozen Stearman A75L-3s from the USA. Although externally similar to the PT-1 version, the newly delivered Stearmans were classed as observation aircraft and given the designation O-1. Some sources claim that additional Stearmans were transferred to the PAAC from USAAC stocks, but there is no indication that this is true.

Several new units were formed in 1941, but the exact details are often sketchy. The 10th Bombardment Squadron was formed at Zablan Field, apparently in early 1941, at first with the sole ZB-3A as its only equipment. The unit later moved to Maniquis Field.

In mid 1941, the PAAC finally got to set up a fighter squadron. The equipment was far from top of the line, however, consisting as it did of P-26As previously used as advanced trainers by the USAAC 4th Composite Group. To operate the aircraft, the 6th Pursuit Squadron was formed at Batangas Field. The squadron was assigned the most experienced pilots and engineers from the other units of the PAAC. Meanwhile, the former 6th Observation Squadron at Lahug Field was split into the 9th Observation Squadron and the 11th Air Base Squadron.

There is uncertainty over the number of P-26As received by the PAAC, as well as their delivery dates. USAAC strength reports apparently indicate that ten P-26As were collected at Clark Field in the last week of July 1941, for hand-over to the PAAC. A report from the Philippine Department mentions ten in service on 31 August (by which time two had been lost). A similar report from 30 September mentions 17 P-26As in PAAC hands. The aircraft record cards, on the other hand, only show a single aircraft as transferred to the PAAC on 30 July, with ten more following in September to November (of which one was probably intended as an instructional airframe only). It is therefore obvious that the records were not kept up to date. Furthermore, two other P-26As still on USAAC charge were later lost while flown by a PAAC pilot, indicating that probably most if not all surviving P-26As were used by the PAAC, although not officially transferred. (For this reason, brief details of P-26As supposedly still with the USAAC have been included in the enclosed PAAC aircraft list.)

Other transfers from the USAAC to the PAAC in 1941 included three Martin RB-10B bombers ("R" for "Restricted", i.e. obsolescent) officially handed over in October, and four Douglas O-46A observation aircraft officially transferred in October-November. However, in both cases it is possible that the aircraft were in fact received earlier by the PAAC. Again, there is a possibility that additional aircraft were given to the PAAC without being documented, but this is less likely than for the P-26As.

On 31 July 1941 it was announced that the PAAC would be called to arms and formally inducted into the US Army Forces in the Far East (USAFPE) as of 15 August, and this was duly done in a ceremony presided over by General MacArthur.

Two of the P-26As were lost in a collision on 26 August, although both pilots parachuted to safety. On 13 October, Captain Ruperto Luzon was killed when he flew his P-26A into the ground during dogfight practice.

It was clear to everyone that the P-26As could only be seen as temporary equipment, pending the availability of more suitable aircraft. Arrangements were made in November to hand over the 18 P-35As of USAAC's 3rd Pursuit Squadron to the PAAC as soon as training on the newly received P-40Es had been completed, but this was, of course, never to be.

To satisfy the PAAC's ever increasing need for pilots, Class 42-A consisting of 41 officers and cadets under training at Maniquis had their course cut short and were instead graduated as Class 41-C on 1 December. The PAAC strength now stood at 142 pilots, 17 non-flying officers and some 1,200 enlisted men.

By 7 December 1941, the PAAC consisted of the following units:

Unit Base Commanders

PAAC Headquarters	Zablan	Lt Jonas Victoria
PAAC Supply	Zablan	Maj Mariano Reyes
Primary Flying School	Zablan	Lt Andres Cruz
Basic & Advanced Flying School	Maniquis	Capt Eustacio Orobia
1st School Squadron	Zablan	Lt Andres Cruz
2nd Depot Squadron	Zablan	Lt Ramon Zosa
3rd Depot Squadron	Zablan	Lt José Ramos
4th Air Base Squadron	Zablan	Lt Arsenio Sebastian
5th Photo Squadron	Zablan	Lt John Setzer
6th Pursuit Squadron	Batangas	Capt Jesus Villamor
7th School Squadron	Maniquis	Lt Benito Ebuén
8th Air Base Squadron	Maniquis	Lt Napoleon de Leon
9th Observation Squadron	Lahug	Maj Oscar Sales
10th Bombardment Squadron	Maniquis	Lt Pedro Molina
11th Air Base Squadron	Lahug	Lt Victor Aya-ay

Note that there is some confusion over the exact unit designations of the PAAC in the 1940-1941 period. Certain sources refer to the Observation Squadrons as Observation and Attack Squadrons. Furthermore, the 7th School Squadron is referred to as the 7th Observation Squadron by one reputable source.

Likewise, it is not clear how the aircraft were distributed among the units. The only allocations known for certain are that 6th Pursuit had the P-26s, 10th Bombardment had the B-10s and 9th Observation had the O-46s. Most likely, 1st School had all the PT-1s and 9th Observation the O-1s.

There is more uncertainty regarding the BT-1s, which were supposedly all with 7th School Squadron, together with the P-12Es (which are also reported as based on Zablan). This would make the squadron twice the size of any other squadron, though, which is not supported by the available manpower

figures. Possibly some of the BT-1s were in fact with other units. The B-3A, Stinson and Beech 18Ds were, according to one source, all allocated to the 2nd Depot, although it would make more sense to assume that the Beeches were in fact with 5th Photo. The B-3A is also reported with 9th Observation and the Stinson with 1st School Squadron!

The PAAC at war

The long-awaited Japanese assault on the Philippines began on 8 December 1941. The story of the air battle between the USAAC and the Japanese has been described in detail elsewhere (see e.g. first two sources listed below). Suffice to say that losses were huge among the defenders and things were rapidly looking bleak for the Americans.

On the afternoon of 8 December, Captain Villamor was ordered to take four of his P-26As to Clark Field. From here they carried out some reconnaissance flights over the sea on 8, 9 and 10 December, each night returning to Zablan Field which had become a temporary base for the bulk of 6th Pursuit Squadron.

The PAAC bases had escaped the initial Japanese attacks, but on 10 December Zablan Field was strafed by a formation of A6Ms. Two P-26As and several Stearmans were destroyed, together with the B-3A, a P-12E and a Beech 18. Even so, six of the P-26As managed to get into the air, only to find themselves totally outclassed by the Zeroes. Luckily, all the P-26As managed to return safely.

The same day, Maniquis Field was also hit by the Japanese, who destroyed one or two of the three B-10Bs. These had all been grounded for some time, anyway, after one aircraft had been damaged in a landing accident. The 10 Bombardment Squadron played no active role in the fighting. At least five Stearmans of the 7th School Squadron were also destroyed, leaving only six that could be made serviceable again.

Meanwhile, the 9th Observation Squadron was performing reconnaissance missions for the Army units in Visayas and Mindanao. When leaving for a dusk patrol with three aircraft on 11 December, the CO, Major Sales, was killed when his O-46 crashed on take-off after hitting a vehicle and an antenna.

The 6th Pursuit Squadron moved back to Batangas on 11 December. Only six P-26As remained operational. The following morning one P-26A took off for a reconnaissance mission and shortly 11 o'clock the remaining five were scrambled to attack an approaching formation of 27 G4M bombers. Once in the air, a second formation of 25 G4Ms was discovered. While still intent on their near-impossible task of catching the much faster bombers, the P-26As were attacked by A6Ms. Lieutenant Cesar Basa, who was just returning from his reconnaissance mission, was shot down and killed, while Lt Antonio Mondigo managed to bail out of his burning aircraft. Several of the others were also hit but made it back to their based, which had meanwhile been severely hit by the bombers.

This engagement left the 6th Pursuit Squadron with only four serviceable P-26As. These were used for reconnaissance missions from Batangas and elsewhere. The last flight was made by Lt Jose Kare on Christmas Eve. He was attacked by Zeroes but, although wounded, made it back home. He also claimed one A6M shot down, and it would appear that this was the only one of the four kills claimed by the squadron during the fighting that can be at least tentatively confirmed.

The most numerous aircraft in PAAC service was, of course,

the Stearman. Many of these were lost on the ground and there is no record of any of the armed BT-1s ever used in combat. About a dozen pilots were assigned to fly Stearmans on liaison between Headquarters and the Army units in Luzon. They were also used to fly ammunition to the 6th Pursuit Squadron. The flights were usually made at dawn or dusk, at tree-top level, and none of them was shot down.

Last days in the Philippines

On 24 December, as the Japanese Army was marching on Manila, the PAAC personnel were ordered to destroy its remaining aircraft and evacuate to the Bataan peninsula. At least four Stearmans of the liaison flight were flown to Clark Field and abandoned there, but several others were, in fact, brought to Bataan by retreating pilots. Once they arrived there, they were not used much, though. The PAAC personnel were converted to infantry, and attached to regular Army units defending Bataan and, later, Corregidor.

The last combat mission flown by any PAAC aircraft was in a Stearman flown by Captain Jesus Villamor and Sergeant Juan Abanes on 9 February 1942. They took off from Cabcaben airstrip and, with an escort of USAAC P-40s, took photos of Japanese artillery positions in Cavite. On their return flight, they were attacked by Ki-27 fighters. One of the escorting P-40s was shot down, and the Stearman riddled with bullets on landing, but Villamor managed to taxi it into a revetment. The same aircraft was later used to pick up some supplies on the island of Mindoro, on 1 March.

There is a report that Colonel Backes, the PAAC Commander, used the surviving P-12E to escape to Mindanao from Cebu on 5 March 1942. On 12 April, he was evacuated to Australia by a B-17. Around the same time, 10-14 April, several other Americans made good their escape from Corregidor to other islands by using four Stearman BT-1s found on Kindley Field.

There was also an instance where a Filipino flew a USAAC aircraft. Captain Ramon Zosa, a pilot trained in the USA in 1938, was checked out in the last surviving P-35A in the Philippines at Dalirig on 28 April. Based at Valencia and Del Monte, he carried out a few strafing and bombing missions over the next few days, before flying the P-35A to a plantation on north Mindanao and hiding it there.

A large group of other PAAC pilots had been assembled on Mindanao in preparation for evacuation to Australia. In the event, this never happened and many of them later took to the hills to help form the anti-Japanese guerilla movement.

What was very likely the last flight of any PAAC aircraft took place on 19 May 1942, after the surrender of the Philippines, when the Japanese arranged for an American POW, John Valkenaar, to fly a captured BT-1 from Davao to Nichols Field near Manila. It is possible that one or two other aircraft, particularly Stearmans, were also captured intact, but there is no reason to believe that they would have been of much interest to the Japanese. Either way, none of them survived until the end of the war.

Painting and marking of PAAC aircraft

The sad truth is that very little is known on this subject, except what is immediately obvious from the enclosed photos. It is useful to keep in mind, though, that the PAAC was for all practical purposes always a part of the USAAC.

Stearmans: There is nothing to indicate that the different versions were painted differently on delivery, nor that they were repainted when war broke out. One school of thought maintains that they were painted olive green with coral red wings and tails. This is based on vague recollections of red, or partly red aircraft, and of aircraft painted olive green. Preferring the theory that the obvious is probably correct, my suggestion would be that they were painted in the standard USAAC trainer paint scheme of the times, i.e. Light Blue No.23 and Yellow No.4.

Stinson and Beech: The few existing photos suggest a dark fuselage/light wings paint scheme, in other words probably Light Blue and Yellow. One source claims at least one Beech was operated in an overall aluminium scheme, possibly indicating that one or both reverted to natural metal finish, as was directed for USAAC "tactical aircraft" from the autumn of 1940.

P-12E: No photos exist. According to USAAC regulations, they should have been Light Blue and Yellow. However, it is known that some P-12s based in the Philippines retained the pre-1934 colour scheme of Olive Drab and Yellow as late as the autumn of 1939, so possibly they still did a year later.

B-3A: The only known photo indicates a Light Blue and Yellow aircraft. It is certainly not overall aluminium, which would be the only alternative according to then-current USAAC regulations.

P-26A: All sources they were camouflaged, although a few unpainted aircraft were apparently in use at first. The cowlings are claimed to have been insignia blue. All sorts of green and/or brown colour camouflage schemes have been suggested. A normal Olive Drab upperparts and Neutral Grey undersides scheme would seem the logical choice. The enclosed (poor) photo may at first suggest a two-tone scheme, but will at closer inspection lend itself to virtually any interpretation: two-tone camouflage, Light Blue and Yellow (with overpainted US markings), or Olive Drab (with overpainted US markings), or any mix of these.

B-10B and O-46A: No photos exist. Most likely, Olive Drab upperparts and Neutral Grey undersides would have been used, since these had been introduced as standard USAAC colours for "tactical aircraft" in April 1941.

Markings: The national insignia was dark blue and white, and carried in six positions (wings and rudder). Aircraft serials were painted in white on the nose of the aircraft, at least on Stearmans and Beech 18s. The Stinson apparently did not carry a number. Around 1940, the serial number on the nose was replaced by a tactical number (i.e. a sequence number within a unit). Stearmans still had these in white on the nose, while P-26As had theirs in black on the fin. Nothing is known about the other types.

Most aircraft, until at least 1940, carried two lines of text in white on the rear fuselage. The first line read "A.C. PHIL. ARMY" while the second showed the aircraft type and serial. Individual markings were apparently rare, although a system of stripes and chevrons was evidently used to indicate lead aircraft.

Sources

"Bloody Shambles", vol.1, by Christopher Shore et al. (Grub Street, London, 1992)

"Doomed at the Start" by William H. Bartsch (Texas A&M University Press, 1992)

"Guardian of Philippine Skies" (PAF, Manila, 1970)

"The Philippine Air Force Story" (PAF, Manila, 1992)
 "The Philippine Army 1935-1942" by Ricardo Trota Jose
 (Ateneo de Manila University Press, Manila, 1992)
 "Trails in Philippine Skies" by Enrique B. Santos (Philippine
 Airlines, Manila, 1981)
 Interviews with Brigadier-Generals Jesus Z. Singson and
 Felix T. Pestana, both PAAC Class 41-B

A very special thanks to Bert Anido (former SAFCH mem-
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AIRCRAFT OF THE PRE-WAR PHILIPPINE ARMY AIR CORPS: DELIVERIES 1936-1939:

Serial	Type	C/n	Delivered/ Test flew	Remarks				
36-1	Stearman 73L-3	73062	May 36		39-22	Stearman 76D-3	76056	Oct 39
36-2	Stearman 73L-3	73063	2 May 36		39-23	Stearman 76D-3	76057	Oct 39
36-3	Stearman 73L-3	73064	May 36		39-24	Stearman 76D-3	76058	Oct 39
36-4	Stinson SR-7B	9692	Jun 36		39-25	Stearman 76D-3	76059	Oct 39
37-5	Stearman 73L-3	73065	8 May 37		39-26	Stearman 76D-3	76060	Oct 39
37-6	Stearman 73L-3	73066	13 May 37		39-27	Stearman 76D-3	76061	Oct 39
37-7	Stearman 73L-3	73067	19 May 37		39-28	Stearman 76D-3	76062	Nov 39
37-8	Stearman 73L-3	73068	19 May 37		39-29	Stearman 76D-3	76063	Nov 39
37-9	Stearman 76D-1	76011	17 May 37	"Spirit of Cebu"	39-30	Stearman 76D-3	76064	Nov 39
37-10	Stearman 76D-1	76012	5 May 37		39-31	Stearman 76D-3	76065	Nov 39
37-11	Stearman 76D-1	76013	14 May 37	Cr. 30 Jan 38	39-32	Stearman 76D-3	76066	Nov 39
38-12	Stearman 76D-3	76050	38		39-33	Stearman 76D-3	76067	Nov 39
38-13	Stearman 76D-3	76051	38		39-34	Stearman 76D-3	76068	Dec 39
38-14	Stearman 76D-3	76052	38		39-35	Stearman 76D-3	76069	Dec 39
38-15	Stearman 76D-3	76053	38		39-36	Stearman 76D-3	76070	Dec 39
38-16	Stearman 76D-3	76054	38		39-37	Stearman 76D-3	76071	Dec 39
38-17	Stearman 76D-3	76055	38		39-38	Stearman 76D-3	76072	Dec 39
38-18	Stearman 73L-3	73069	38		39-39	Stearman 76D-3	76073	Dec 39
38-19	Stearman 73L-3	73070	38		The above serial numbers batches are likely correct, although only numbers 1-3, 5-13, 21, 30 and 34 have been positively confirmed. The link-ups between individual serial and construction numbers for the Stear- mans are not confirmed, although the c/ns listed are all known to have been delivered to the Philippines.			
38-20	Stearman 73L-3	73071	38					
38-21	Beech 18D	220	30 Sep 38					
39-22	Beech 18D	223	14 Apr 39					

AIRCRAFT OF THE PRE-WAR PHILIPPINE ARMY AIR CORPS: DELIVERIES 1940-1941

It is uncertain whether or not the ex-USAAC aircraft handed over to the PAAC
 were given new serials, although it does seem possible that at least the P-12s
 and the B-3 got PAAC serials. As for the last 12 Stearmans received, they were
 presumably also given PAAC serials but these are unknown.

Boeing P-26A	s/n 33-108	5 Nov 41
Boeing P-26A	s/n 33-120	5 Nov 41
Boeing P-26A	s/n 33-131	8 Sep 41

(Additional USAAC P-26As extant in the Philippines in late 1941 were: 33-99,
 crashed 26 Aug 41 by PAAC pilot; 33-138, crashed 13 Oct 41 by PAAC pilot;
 33-36, 33-40, 33-58, 33-73, 33-81, 33-109 and 33-118, all of which were condemned
 on 18 Jan 42)

Martin RB-10B	s/n 34-35	18 Oct 41
Martin RB-10B	s/n 34-47	31 Oct 41
Martin RB-10B	s/n 34-49	18 Oct 41

(Additional USAAC B-10Bs extant in the Philippines in late 1941 were: 34-33,
 34-40, 34-51, 34-70, 34-76, 34-93, 34-110, 35-232 and 35-238, all of which were
 condemned on 18 Jan 42; also 34-88, which escaped back to the USA in Jan 42)

Douglas O-46A	s/n 35-165	19 Nov 41
Douglas O-46A	s/n 35-168	29 Oct 41
Douglas O-46A	s/n 35-169	29 Oct 41
Douglas O-46A	s/n 35-178	29 Oct 41

(Additional USAAC O-46As extant in the Philippines in late 1941 were: 35-196,
 condemned on 31 Oct 41; 35-162, 35-163 and 35-181, all of which were con-
 demned on 18 Jan 42)

NOTE: The large three-digit numbers painted on aircraft from circa 1940 were
 tactical numbers rather than serial numbers. Known numbers are:
 Stearman (PT-1 and/or O-1):102, 111, 112, 114, 115, 116
 P-26A:303, 306, 310

Type	C/n or USAAC S/n	Transfer date	Remarks
Boeing ZP-12E	s/n 31-579	14 Mar 40	
Boeing ZP-12E	s/n 31-581	14 Mar 40	
Keystone ZB-3A	s/n 30-316	23 Oct 40	Destr. 10 Dec 41
Stearman A75L-3	752570	41	
Stearman A75L-3	752571	41	
Stearman A75L-3	752572	41	
Stearman A75L-3	752573	41	
Stearman A75L-3	752574	41	
Stearman A75L-3	752575	41	
Stearman A75L-3	752576	41	
Stearman A75L-3	752577	41	
Stearman A75L-3	752578	41	
Stearman A75L-3	752579	41	
Stearman A75L-3	752580	41	
Stearman A75L-3	752581	41	
Boeing P-26A	s/n 33-31	18 Oct 41	
Boeing P-26A	s/n 33-38	5 Nov 41	
Boeing P-26A	s/n 33-50	15 Oct 41	
Boeing P-26A	s/n 33-54	5 Nov 41	
Boeing P-26A	s/n 33-59	30 Jul 41	Cr. 26 Aug 41
Boeing P-26A	s/n 33-61	18 Oct 41	Non-flyable?
Boeing P-26A	s/n 33-102	Oct 41	
Boeing P-26A	s/n 33-105	5 Nov 41	

PAAC Photos on pages 139-140. (All photos via Bert Anido.)

a. The first four aircraft of the Philippine Army Air Corps, three Stearman 73L-3s and a Stinson Reliant, lined up outside the main hangar on Zablan Field. Note the text blocks on the rear fuselages.

b. This photo of the first Beech 18D delivered to the PAAC indicates that it was painted and marked similarly to the Stearmans.

c. The underwing titles are shown to good effect in this view of the sole PAAC Stinson (which

has apparently had its cowling removed).

d. Stearman 39-30 shows of the standard fuselage text block. The fuselage stripes and top wing chevrons (just visible in the original) are believed to have indicated a formation commander.

e. A rare bird indeed, the sole PAAC B-3A was the only one of its type to survive into WWII. A fuselage text block is barely visible under the gunner's position. The P-26A is still in USAAC markings.

f. Around 1940, the PAAC introduced tactical numbers on at least some aircraft. Here Flying

Cadet Uldarico Magtolis (of Class 42-B) is leaning against his trainer in 1941. His class had barely started flying training when war broke out.

g. This PAAC Stearman is, confusingly, marked "PT-17A", probably to conform to standard USAAC terminology. However, the model 73L-3 in fact more resembled the PT-13.

h. The only known photo of PAAC P-26As, taken on 15 August 1941. Note that the second aircraft from the camera still sports a USAAC 3rd Pursuit Squadron badge.

Urbanowicz's Hurricane and P-40: The Search Goes On.

Michael Dobrzelecki

[Author's note: I would like to offer the following updated information based upon my subsequent research since the time I built the 1/24th scale model of Urbanowicz's Hurricane referenced in SAFO #79, and offer a few notes on his P-40, as well. Before I get into the heart of the matter, though, it is important to note that, without properly documented photographs, an author can not claim full authenticity for a proposed aircraft's markings, especially if one is trying to relate it to a specific pilot. Another SAFO member, Chris Choloniewski, who has authored quite a few works on the Polish Air Force, and I have had a lengthy correspondence on this very subject over the years regarding Polish aircraft. Too often, the purported schemes on aircraft profiles rendered by artists have little-to-no basis in fact. When a researcher does attempt to do a thorough job in nailing down the specifics, even dating them to a specific narrow time period, there still could remain gaps in the information. It is the fortunate soul who is blessed with several views of the same subject, a rare event, indeed. One is then left with a quandary - do you proceed with what you have, noting which aspects are shaky, or do you wait for the veritable "last" photo or definitive source.

I happen to believe in the former course and my article on the "First Kills Over Poland" in Fine Scale Modeler's first special issue, "Modeling The Second World War", carried this caveat in the opening remarks. The other reasons that I follow this course, are that I have a hankering to build the model now and, in the final analysis, when you publish something, it has a tendency to flush out more photographs and documentation, which may offer the definitive answers the researcher was seeking earlier. Someone has to take the first steps, explain the basis for his choices on markings, note what is not definitive and then get the article in print. The very nature of this scholarly pursuit is one of the things that make this hobby interesting and exciting. Personally, I look forward to feedback on the things I write about - even those critics who take a negative view (many without supporting their own position) are, at least, entertaining. So much for my philosophy - now onto the meat of the matter.]

The model described in the SAFO article is one of many Hurricanes Witold flew in those desperate days in the late summer and early fall over the skies of England in 1940. My model was featured in an article penned by a noted reporter, Jack Elliot, who covers topics of interest related to aviation in New Jersey. Jack's column appears on a weekly basis in *The Star Ledger*. Although the reporter gives me credit for accurately portraying this Hurricane, it did contain a few flaws, despite

the fact that I received assistance from some various museums in England and the RAF, itself. I can understand the kind of pressure various institutions and government agencies were under trying to prepare for their own festivities of this important 50th anniversary in England's history. Little time was available to answer what had to be a blizzard of requests from all over the world for information pertaining to the Battle of Britain. Also, there is no substitute for conducting your own research of primary documents. Since then I have identified most of the specific aircraft Urbanowicz flew and I am awaiting definitive answers from J. Cynk and the RAF on the others. This information will be incorporated into the short book I wrote on Urbanowicz, which I mentioned in a previous SAFO issue.

One photograph has come to light depicting Urbanowicz in front of the Hurricane, most associated with him, coded RF* A. The photo enclosed appeared in Jan Koniarek's Squadron Signal publication, "Polish Air Force 1939-1945" on page 24. Jan's caption, stating that the serial number is P3126, is wrong. Both Jan and I now agree that the correct serial number is P3120. The height of the alpha numeric characters of the serial number officially were supposed to be eight inches, but, for some strange reason, were applied in six inch high characters to Hurricanes during this period.

This photo also appears on page 39 of the book on the Polish aces, "Asy polskiego lotnictwa", (lower case letters are the author's) by Jozef Zielinski. Unfortunately, Zielinski identifies the pilot as Zdzislaw Henneberg, which is obviously incorrect. The maddening thing about the photo is that Urbanowicz is blocking the view of the central portion of the Hurricane's fuselage, thus denying confirmation of both the existence of Urbanowicz's personal markings on this aircraft, the legend, "We Do Not Beg For Freedom We Fight For Freedom", taken, according to Urbanowicz, from a poster of the period extolling the Polish fighting men in exile in England, and the exact placement of the Kosciuszko Insignia on the fuselage. On my model, I rendered Urbanowicz's legend in Medium Sea Grey letters, one sentence on top of the other just under and slightly ahead of the cockpit. It could have also been in black per Urbanowicz. Max Grace depicted it in one continuous line on his lithograph. This lithograph included both the Polish Chessboard and the Kosciuszko Squadron insignia. As the photo approximately dates from late September to early October, 1940, the presence of the chessboard is not very likely. The placement of the Kosciuszko Squadron badge on the Hurricane's hump behind the cockpit in the lithograph was a better decision by Max, as reflected by photos of other 303 Squadron Hurricanes of the period. 303

Squadron stood down for a rest in October and Urbanowicz left the Squadron early in the month for a brief rest prior to being reassigned to a staff position.

The other intriguing thing in the photo of P3120, is that it shows a relatively wide band painted diagonally from the top of the rear fuselage extending down under the horizontal stabilizer covering some of the fairing to the tail wheel. The color appears to be a dark one, possibly blue, red, black, etc. Jan and I have discussed this band, which I originally thought might possibly be a cloth band tie-down, but is obviously (as shown in better quality prints) painted on the fuselage. The significance of the band is lost to history for the time being, but the most likely explanation is that some aircraft assigned to squadron leaders (like Urbanowicz) or flight leaders may have carried this band to serve as a quick identification of senior leaders in the heat of combat by the rest of the squadron. A photo exists of another Hurricane, coded RF* J, serial V6665, which was published in *Aeroplan* #4, 1995, with this same band. The bands are very reminiscent to the bands carried on some pre-war Polish fighters. My model Hurricane does not have this band.

The rest of the description of the markings is accurate. P3120 had the "B" scheme (official directives stated that even serialized aircraft had the "B" scheme and odd numbered should have the "A" scheme). The underside color, Sky, could be subject to some interpretation. The greenish hue Sky color familiar to most buffs may not have been used at this time. According to the Ducimus series on Camouflage and Markings of various aircraft like the Hurricane, Spitfire, etc., some had a true light blue shade, sometimes referred to as Duck Egg Blue, resulted from mixing paints outside of official specifications. I was conservative, though, and went with the classic shade of Sky along with the usual Dark Earth and Dark Green.

The colors on RAF fighters between May and November 1940 underwent many significant changes, which both help and confuse the researcher simultaneously in dating the aircraft! The colors, roundel sizes and types and fin flash chosen all date from the period after August 1940. The roundels were as follows: Top Wing 49-inch diameter Type B; Bottom Wing 40-inch diameter Type A; Fuselage 35-inch diameter Type A1. The codes were generally 36 inches in height, but the Hurricanes generous fuselage often saw larger outsized codes in the Battle of Britain. The custom decals I had made for my model are too light a shade of gray and photograph almost white, unfortunately. I tried to convey the concept of "scale-effect" to the gent who did the decals for me and he took the concept a bit too far. Most Battle of Britain fighter



decals I see go in the opposite direction in my opinion, with the Medium Sea Gray depicted too dark - almost an Ocean Gray. Needless to say, another cautionary note is needed on interpreting colors on black and white photos and being too dogmatic about specific shades of colors, especially on models. I also feel that the codes I had made were slightly too large in comparing them with the photo. Theoretically, I could rework my model, but, since it is autographed by Witold and is retired in IPMS competition, having won at a National Convention, I will probably leave well enough alone and build another (smaller scale this time) using the updated information I now have.

Regarding Urbanowicz's P-40, I am afraid that both the specific model P-40 and scheme depicted in most of the artists' profiles and repeated in the pages of SAFO may have no basis in fact. At least, I would like to see a well-documented photo of this scheme, which is alternately shown as either a P-40K or P-40M. The only photo that has come to light showing a P-40, numbered

"188", in the 14th Air Force, 23rd Fighter Group, 75th Fighter Squadron around the time when Urbanowicz was knocking around in China, is a P-40N, Olive Drab and Neutral Gray, spinner as depicted in most of the profiles, no other personal or squadron insignia, no victory markings. The finish was very reminiscent of Don Lopez's "Lope's Hope". It was a P-40N in this finish that Roy Grinnell chose for the painting of Urbanowicz's "Double Kill", after a lengthy correspondence between the painter and myself. The painting now hangs in a museum in Warsaw and prints may be released by Grinnell at some point in the near future. There were a lot of P-40K's and P-40N's in the CBI, but almost all P-40M's wound up in British and Commonwealth service, so, although it is possible that he flew a P-40M, it is not as likely. The "188" was probably rendered in white numbers; Roy initially thought that the numbers on the 23rd F.G.'s P-40's were derived from their serial numbers, but I showed him that they were, in fact, numbers assigned within the squadron and/or group at a local level. The painting has these numbers incorrectly rendered in yellow, the color associated with USAAF

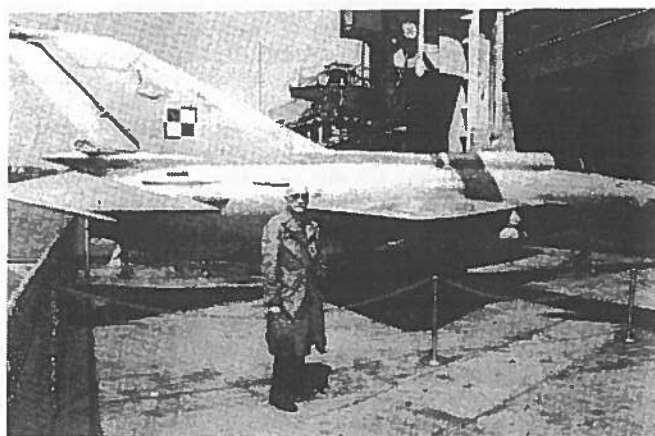
serial numbers in 1943. He stated that it may be possible to correct this minor error in the commercial prints, if and when, they are released.

Having gone through this analysis of the available information on Urbanowicz's P-40, it is incumbent upon any researcher to keep an open mind. Urbanowicz probably flew several different P-40's, he may have had even more than one personalized in some way and it is conceivable that there was more than one P-40 numbered "188" if the earlier was written-off. The choice of markings depicted in Grinnell's painting as researched by Roy and myself was, however, approved by Urbanowicz prior to

proceeding with the finish work and his approval, along with the photo that surfaced on the P-40N serve as the basis for the claimed scheme. I hope this information gets to SAFO readers before too many take the plunge in building models of his aircraft. I was hanging onto the information to include as fresh material for the book on Urbanowicz, but felt an early release of some of this was warranted to correct my earlier research printed in SAFO. I look forward to hearing of any new "facts" and obtaining new photos on any of Urbanowicz's aircraft, which will enrich the knowledge of and peak the interest of all those with a burning passion for Small Air Forces. There are one or two goodies I am still saving for the book. I'll keep SAFO readers posted on my progress in getting it published. I am using the time to incorporate some additional information into the text. Consider this tid-bit just a teaser, until the finished product sees light of day.

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Photos: (a) Squadron Leader Witold Urbanowicz, circa late September - early October 1940, in front of Hurricane Mk.I coded RF-A, serial P3120. Note dark-colored band on rear fuselage. Photo: Sikorski Institute via Jan Koniarek. (b) General Urbanowicz before a Polish MiG-21 aboard the Intrepid Air & Space Museum. Photo: author.



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[Editor's note: The following is extracted from an article that appeared in the August 1996 issue of ON THE SURFACE, the newsletter of the Naval Surface Warfare Center. While the cost of this equipment is probably way beyond the average scratch builder, it could possibly see application in by the larger manufacturers.]

The Mechanical Engineering and Prototype Fabrication Division recently acquired a Stereolithography machine which greatly improves the Naval Surface Warfare Center Dahlgren Division Coastal System Station's ability to rapidly produce prototype hardware.

This capability allows an engineer to conceive a part one morning, and have a plastic model of the part the following morning. With these plastic prototypes, engineers can evaluate a design more efficiently, demonstrate its feasibility and sell the concept much more rapidly than previous methods would permit. A three-dimensional model can be a tremendous help when trying to explain a new concept or idea to a sponsor.

cept or idea to a sponsor.

The process begins with the generation of a three-dimensional solid model using computer aided drafting software. The solids are output as ".STL" from the CAD software. These files are then oriented and run through a conversion process to generate the necessary instructions to drive the Stereolithography machine.

Stereolithography is a three-dimensional printing process that produces a solid plastic model. The process involves a computer driven laser beam and a vat of photo-curable liquid plastic. The laser generates a small intense spot of ultraviolet light which is moved across the top of a vat of liquid photopolymer by a computer controlled optical scanning system. The laser changes the liquid plastic into a solid where it touches, precisely printing each cross section. A vertical elevator lowers the newly formed layer in very small increments. Successive cross sections, each of which adheres to the one below it, are built one layer on top of

another to form the part from the bottom up. These layers are typically .005 to .020 inches thick. After the last layer is made, the part is removed from the machine and flooded with high intensity UV light to complete the curing process.

The machine can build basically any part which can fit inside the 7.5-inch by 7.5-inch by 10-inch rectangular box. Larger prototypes have also been assembled by gluing parts together.

Rapid prototyping technology is evolving very quickly. The earlier models produced brittle objects made to fairly loose tolerances. Today, the models consist of more durable materials and are built to close tolerances (+/- .003 inches).

The resin in use at NSWCDDCSS can generate rugged parts with a yield strength of 8,000 pounds per square inch. These parts can be finished by various methods including sanding, sandblasting, painting or dyeing and used in actual functioning assemblies.

War Birds by Owers

Grumman/Canadian Car and Foundry G.23

Colin Owers

a. Canadian Car and Foundry G.23. Only G.23 of Nicaraguan Air Arm. Grey overall with national insignia to fuselage. Black legend "Republica de Nicaragua America Central". Black underwing serial 'GN 3' (see detail).

b. Canadian Car and Foundry G.23 Delfin. Spanish Republican markings. Green over light blue camouflage. Red fuselage band, black serial 'AD-011'. Individual numeral '11' on fin in white. National marking on wing is a red band (see part plan view). Rudder stripes, red (top), yellow, and purple.

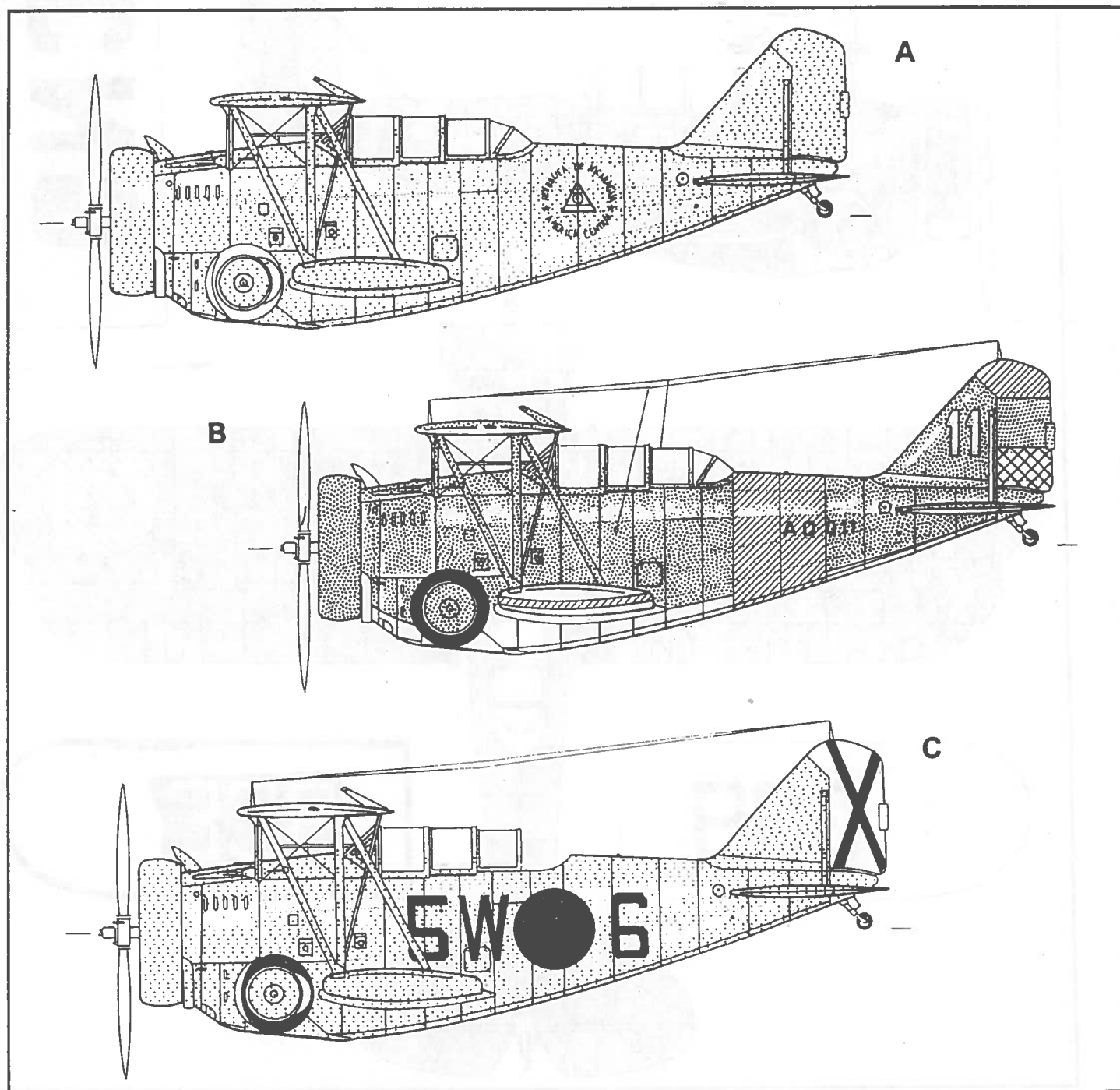
c. Canadian Car and Foundry G.23 Delfin. Spanish Air Force 1939. Light grey overall with black markings (see part plan for wing insignia). Rudder markings black and white.

d. Canadian Car and Foundry G.23 Goblin serial '341' of RCAF in delivery markings. Dark green and dark earth upper surfaces over light blue. Fuselage

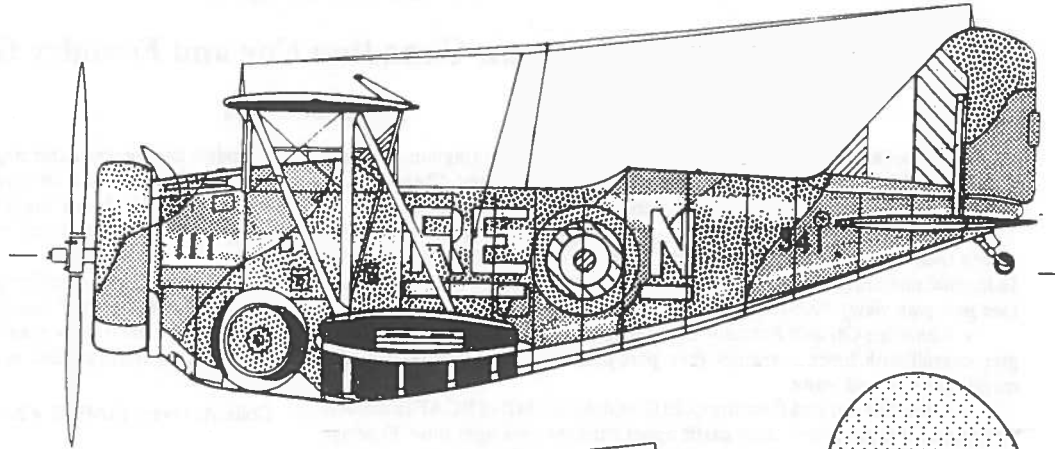
roundels have yellow outer ring. Interplane strut dark earth. Odd aircraft were camouflaged as shown with even serialised aircraft in a mirror image pattern. Lower surfaces of port wings were black with white serials, while starboard wings were white with black serials. The colours met at the centreline of the aircraft.

e. Canadian Car and Foundry G.23 Goblin serial '338' of RCAF. Standard camouflage but mirror image to '341'. Note replacement cowl from even serialised aircraft. Upper plan view is applicable to this aircraft. '341' had the camouflage pattern applied as a mirror image.

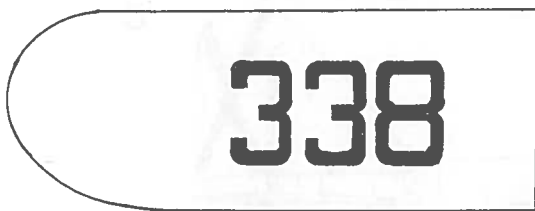
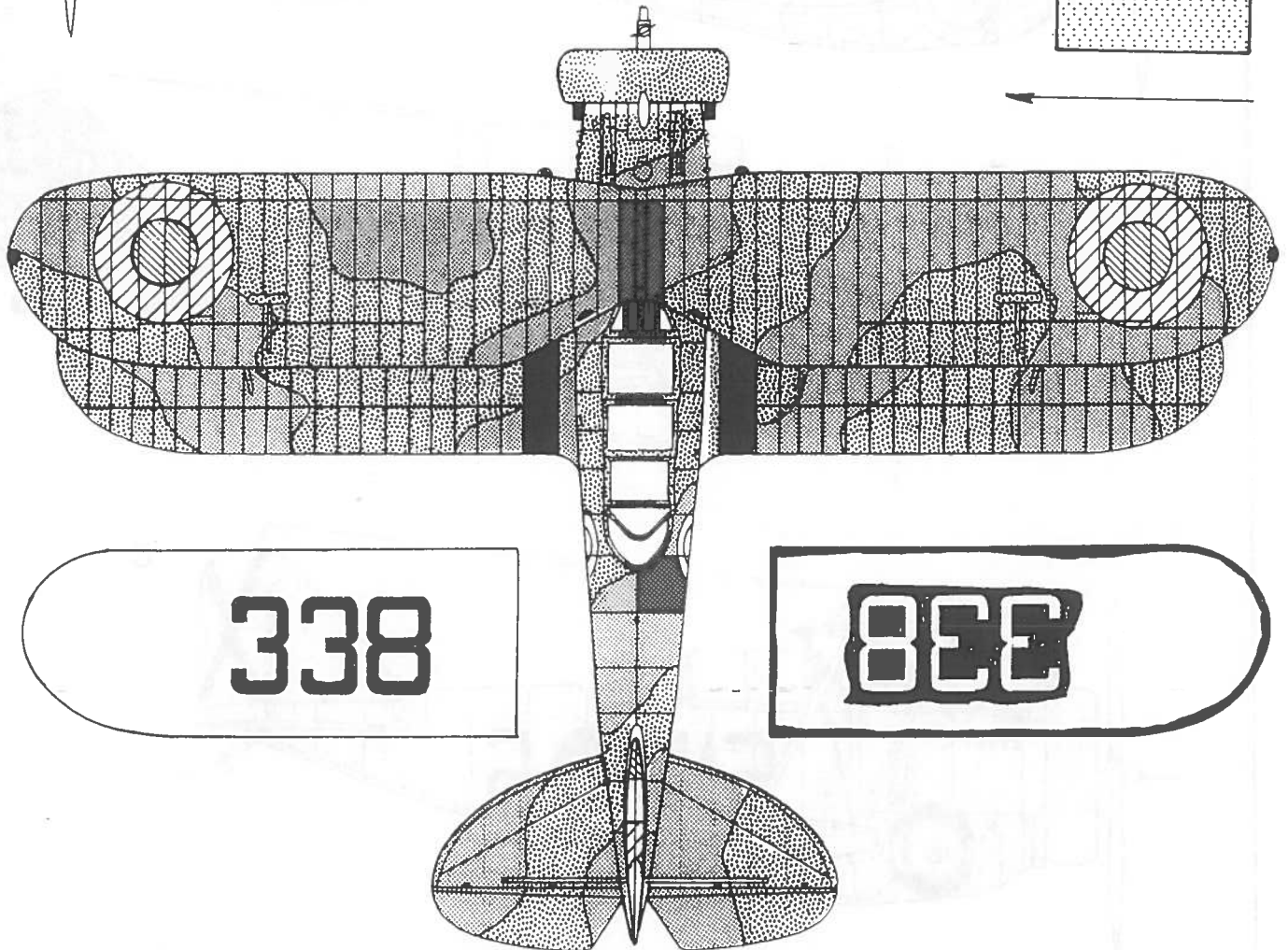
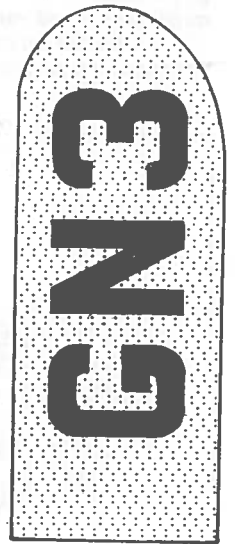
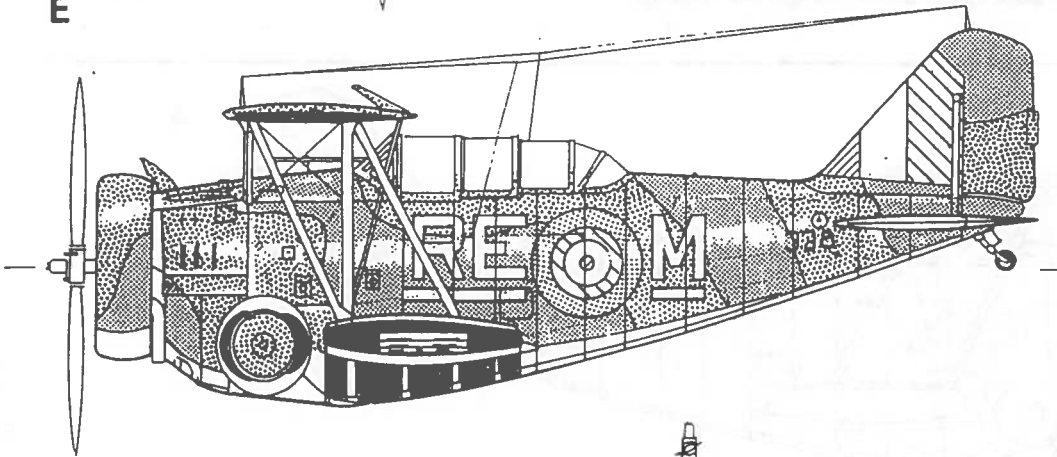
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E



Franco and Finland's Fighting Freccias

George Lowe

[Editor's note: The following article appeared in Small Scale Aviation #2 and is reproduced here with the permission of their editor. Although the photos and drawings of the original article have been omitted, this should give you a feeling for the high quality of material appearing in SSA.]

In 1936 the Italian "Ministerio del' Aeronautica" introduced a specification for three different types of fighter. 1: A lightly armed interceptor. 2: A long range escort fighter and 3: A fighter bomber. Five manufacturers designed aircraft to meet one or other of the requirements but Guiseppe Gabrielli designed his Fiat G.50 to meet all three.

Powered by the new Fiat A74 Rc38 twin row 14 cylinder radial engine the prototype first flew on 26 February 1937 and although it's main rival, the Macchi Mc202, won the competition Fiat were given a production contract of 45 pre-series aircraft as a safeguard against failure of the Macchi production program.

Armed with two 12.7mm Breda SAFAT machine guns synchronized to fire through the propeller the Fiat G.50 began to reach the Regia Aeronautica at the end of 1938 and immediately 10 were sent to Spain for evaluation. This followed a visit to Italy by Spanish Nationalist fighter ace Captain Joaquin Garcia Morato in the 1937 when he tested the G.50 at the invitation of the Regia Aeronautica.

Unloaded at Tarragona the G.50's were immediately sent by road to Reus in Southern Catalonia and allocated the type code 1. They were formed into the Gruppo Sperimentale di Caccia, commanded by Maggiore Mario Bonzano, before being transferred to Escalona which they shared with the famous Fiat CR.32 unit XXIII Gruppo "Asso di Bastoni". The aircraft were painted with the Bastoni emblem. Used mainly to fly top cover for the CR.32 Gruppo during the last weeks of the conflict they saw no actual combat. Two more G.50's were delivered in 1939 bringing the Spanish total to 12.

During operations in Spain it was found that the cockpit canopy very soon went opaque obscuring the pilots visibility. Many pilots chose to fly with the canopy in the open position and on later G.50's the aircraft were modified to have fully open cockpits.

At the end of hostilities the remaining G.50's were handed over to the Ejercito de Aire and served with the He 112B's of Grupo 27 of the Regimiento Mixto Num 2 based at Melilla in Spanish Morocco. They were withdrawn from service in 1943 due to a lack of spares.

Another operator of the G.50 was the Finnish Air Force who operated the type from October 1939. The G.50 served with Lelv 26 and scored 11 victories before the end of the Continuation War against the Soviet Union. At the start of the Continuation War Lelv 26 was equipped with 30 "Fijjus", as the G.50 was known by the Finns, and the type served through until March 1944 when they were replaced by Brewster 239's.

The Finnish G.50's were supplied in three different batches: 8 x G.50 Series 1; 18 x G.50 Series 2; 9 x G.50 Series 3

Some of these aircraft were delivered with the early type of enclosed cockpit but once in service the sliding portion of the canopy was removed due to the same problems encountered in Spain. To give the pilot some protection against the elements small side panels were added. the glazed rear hump was simply

painted over and according to some sources this was later replaced by a metal one.

Modelling the G.50

Up to now the only kit of the G.50 in 1/72nd scale has been the rather elderly Airfix offering. This depicts the G.50bis and has some rather glaring inaccuracies. The main fault being the engine cowling which is far too narrow in diameter. By using the Airfix kit it was only possible to build the later versions of the aircraft but now thanks to Dujin of France you can now add all of the earlier versions as used in Spain and Finland.

There are conversion kits in resin for use with the Airfix kit and the three that are of interest in this article are:

1. Kit No. DU30. Fiat G.50 Pre-series: This kit depicts the version with the fully enclosed cockpit and early type tall fin and rudder. This was the type used during the Spanish Civil War. It can though also be used to represent the early series 1 aircraft used by the Finns (eg serial no. FA-16).
2. Kit No. DU31. Fiat G.50 Series 1: This kit depicts the series 1 as modified by the Finns into the open cockpit version with the small side panels and painted rear hump. (eg serial nos. FA-4, 5, 19).
3. Kit No. DU33. Fiat G.50 Series 3: This portrays the late version with the later style raised rear fuselage, low aspect ratio fin and balanced rudder. (eg serial nos. FA-22, 26)

These kits all follow the same basic format, the parts are molded in a pale yellow resin and consist of two fuselage halves, a beautifully detailed engine cowling (of the correct diameter) and a sheet of resin carrying the remaining parts such as a Hamilton Standard propeller, different spinners, carburetor air intakes and numerous other items. One good thing from this is that after you have built the model of your choice you have a good selection of items for the spares box. As well as the resin parts there is a vac-formed canopy for the type that you are building. The standard of engraved surface detailing is of a very high standard and all of this is backed up by a comprehensive instruction sheet common to all kits. All you need from the Airfix kit are the wings, tailplane and undercarriage.

Building the Trio

I decided to model all three versions, a Spanish Civil War Pre-series and the two later series Finnish versions, so the construction notes apply to all three variants unless otherwise stated.

The fuselage is molded in two halves, which are of a solid casting with a hollow cut out for the cockpit, so before starting construction I found it necessary to thin down the cockpit side walls. For this I used a mini drill with grinding bit attachment. Next the mating faces of the fuselage were sanded flat using a sanding block to ensure a good surface for the two halves. At this stage the rudder was removed from each half as were the cockpit entry doors (on series 3 only).

Using the plan on the instruction sheet and cutaway in Air International Vol.34 No.5 I started work on the cockpit interior. First the sidewalls were detailed using 20 thou plastic strip to represent the stringers, next a floor and rear bulkhead from 20 thou card were added before the resin seat was superglued in place. Rudder pedals and control column were scratch built and

added along with smaller details such as throttle levers and oxygen bottles. Finally the instrument panel was added after detailing. With this area complete the interior was airbrushed with Light Grey and when dry highlighted with darker washes and lighter dry-brushing. The cockpit assembly was now glued into place and when set the fuselage halves cemented together using two part epoxy resin, clamped together, and left overnight to set properly.

Next the front and rear cylinder banks for the engine were removed from the resin carrier, cleaned up, and cemented together. The engine cowling was removed from its backing and once cleaned up was airbrushed Dark Grey along with the engine. When dry these were also given darker washes before highlighting by dry-brushing.

The wings from the Airfix kit were now prepared for fitting to the fuselage. Before assembling the wings it was found necessary to scribe panel detail onto the wings as those already on the kit were very sparse. This was done by using the Dujin plans as a guide. Once the ailerons were removed the wing halves were cemented together and when dry trimmed to fit the Dujin fuselage.

The tailplanes were prepared next including the removal of the elevators in order to display them in the drooped position. It was now found necessary to fill a few gaps with Miliput which was left overnight to cure thoroughly before rubbing down.

The undercarriage bays were now boxed in using 10 thou plasticard and interiors detailed using plastic strip and rod. The cutaway in Air International was useful here. Next the ailerons and rudder were glued in place but at a slight angle.

The engine was now glued onto the mounting on the front of the fuselage and when set the cowling was fixed in place. The two exhaust pipes were now made from plastic tubing and inserted into the spaces behind the cowling, these were followed by the carburetor intakes on the undersides of the cowling.

Turning to the undersides of the rear fuselage a hole for the tail wheel was drilled and the wheel glued into place. Aileron mass balances from the resin sheet were prepared and added to the ailerons. On FA-19 only a hole was drilled in front of the windscreen offset to starboard into which the radio aerial was now fitted.

Two crash pylons were now made from 20 thou strip using the diagram on the instruction sheet as a guide. When dry these were fitted behind the pilots seat on the Spanish Pre-series and FA-19. The rear hump for FA-19 was now prepared, this is molded in clear acetate as part of the complete canopy of windscreen and side panels. The complete unit was removed from its base and then separated into its individual pieces. The inside of the hump and side panels were now airbrushed Light Grey and once dry the hump was glued in position behind the cockpit and over the crash pylon.

The other Finnish aircraft is slightly different as the canopy only consists of the windscreen and smaller side panels of the late model G.50. This was removed from the base and separated into windscreen and side panels. The insides of the side panels being airbrushed Light Grey. The canopy for the Spanish Pre-series aircraft was yet again different to the others. This enclosed canopy was cut into three pieces, the windscreen, rear section and sliding section.

The main undercarriage was now assembled using the legs and wheels from the Airfix kit. The clumsy doors were replaced by ones made from 15 thou plasticard using the instruction sheet drawings as a guide. Each door is made up of three parts, the upper portion is glued in place at the outboard end of the undercarriage bay while the other two pieces are fastened to the leg, it was only necessary to make doors for the Finnish aircraft as those operated in Spain had them removed. Hydraulic pipes were made from 5 amp airbrushed Light Grey. The oleo legs then painted Silver and once dry the entire units given a wash of a darker shade before dry brushing with a lighter one to highlight the detail. The wheels were painted Dark Grey with Aluminium hubs.

The propellers were removed from the resin carrier and cleaned before painting. Those fitted to FA-26 and the Spanish aircraft were not fitted with spinners so were sprayed with Aluminium fronts and Black rears before highlighting with a wash and dry brushing. The one fitted to FA-19 was different as it was fitted with the more pointed of the spinners. The spinner was painted Yellow while the blades were Black with Yellow tips.

The models were now masked for painting. The Spanish Civil War aircraft was finished in the standard Italian scheme of Sand with mottled Green upper surfaces and Light Grey undersides. This was applied by airbrush in order to achieve the right effect. The Spanish Nationalist markings came from a Blue Rider decal sheet and the Italian squadron insignia (Asso di Bastoni) from the Superscale Italian sheet. Code numbers were taken from the Airfix kit decal sheet.

FA-19 was finished in the none standard scheme of Olive Green/Dark Green upper surfaces with Light Grey undersides, and Yellow theater bands around the cowling, rear fuselage and under the wingtips. The decals were taken from the InScale 72 sheet AC005 for the Fiat G.50.

FA-26 was finished in the same scheme as the Spanish Civil War aircraft but with the addition of the Yellow theater bands and again the decals came from the InScale 72's sheet AC005.

Once dry the final touches were added. The undercarriage assemblies added as were the transparencies. The airscrews, machine guns (modified from Aeroclub Brownings) and cockpit entry panels (on the Finnish aircraft only). The portside ones being displayed in the open position.

The transparencies framing was added using painted clear decal film cut into thin strips. Radio antenna, from rolled wire, was added and the models were now complete.

To sum up I really enjoyed building these models as they made interesting and attractive additions to my model collection being somewhat different to the standard Airfix kit.

In the UK the Dujin conversions are available from Han-nants but it is advisable to check availability before ordering.

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- IPMS Finland Mallari Nos. 87 and 88.
- Air International Vol. 34 Nos. 5 and 6.
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AIRCRAFT OF THE SPANISH CIVIL WAR - PART 10

SPANISH ARROWS

Bob Massey

The Fiat G-50 flew for the first time in February 1937 and 12 preproduction machines with enclosed cockpits were sent to Spain in 1938. These aircraft formed the Gruppo Caccia Sperimentale which operated on behalf of the Spanish Nationalists in the Civil War. The enclosed cockpits were disliked by the Italian pilots and were always left open in flight. This led to the removal of the cockpit canopy on production aircraft.

The following drawings show the colour schemes applied to the G-50s while in Spain.

Fig. A: This finish was carried by all G-50s on their arrival in Spain. It consists of sand on all upper surfaces and pale grey undersides. The engine cowl is olive green, and the wing tips are white. A black cross was applied on the white rudder. The wing markings are shown in Fig. D. Black numbers were applied to the fuselage sides; the '1' indicating the aircraft type and the '9'

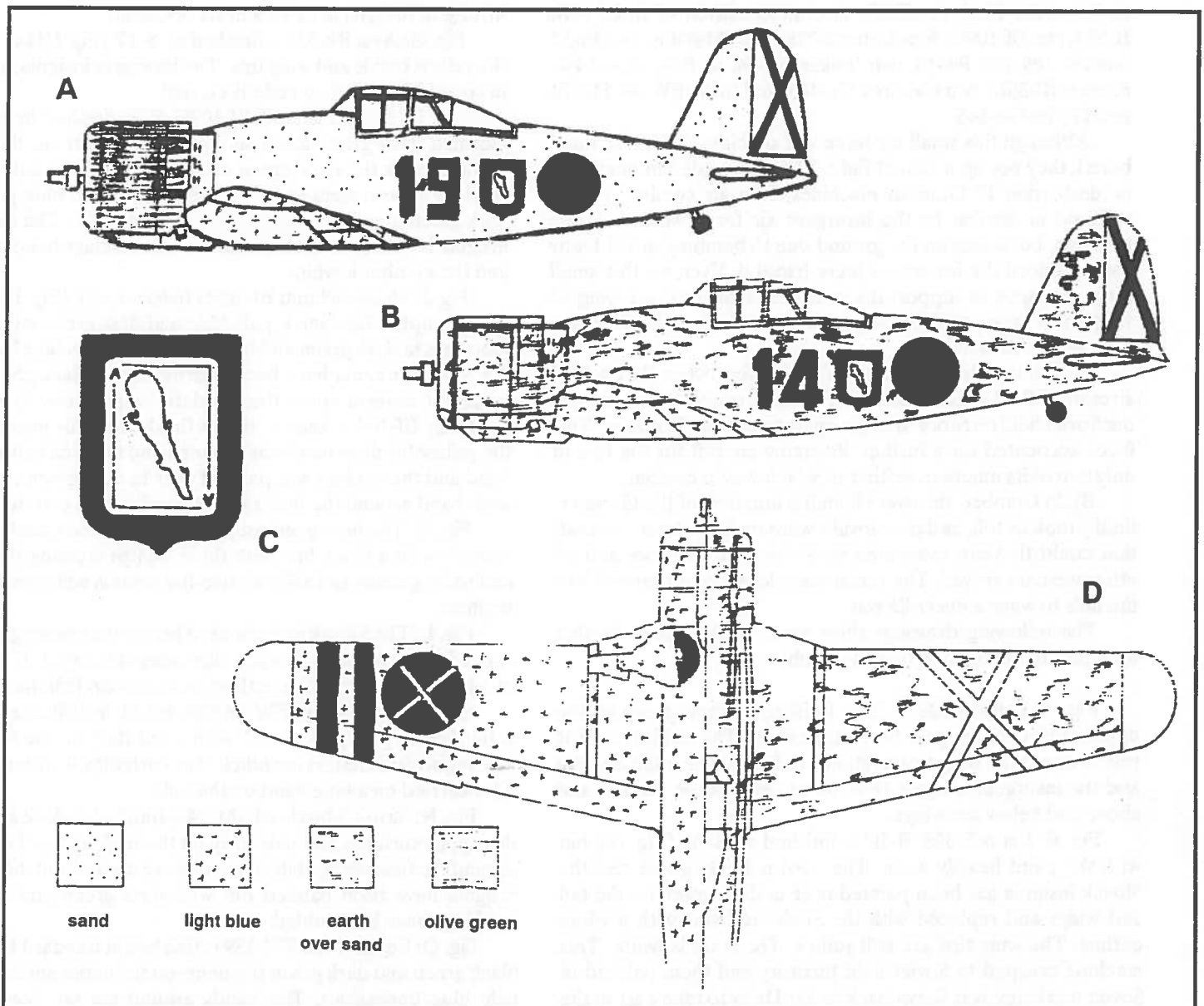
the individual aircraft. The Gruppo badge (Fig. C) and a black disc were applied to the fuselage.

Fig. B: This is the finished applied to most of the G-50s while they were in Spain. It consists of sand mottled with earth on the upper surfaces light grey undersides. Some aircraft carried this finish without any fuselage markings.

Fig. C: The Gruppo badge was a shield in black with a white card and brown club.

Fig. D: The national markings carried on all G-50s consisted of white crosses on the upper surfaces. The under surfaces of the wings were marked with two black lines and a black disc with a white cross in the center.

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SEVEN WEEKS AT THREE OAKS

Aircraft of the Slovak National Uprising

Bob Massey

After the German invasion of Czecho-Slovakia in March of 1939, the country was partitioned and the "independent" state of Slovakia became Germany's first "ally". The Slovak people, however, resented this alliance and plans were soon formed for an uprising. These plans had the wholehearted support of a majority of the armed forces. By 1944, under the leadership of General Golian, plans were well advanced for an uprising that was to begin when the fast-advancing Soviet forces reached the border of Slovakia. However, to safeguard their supply lines, the Germans invaded the country on 29 August 1944 before all the preparations were completed. The Slovaks managed to hold onto an area bounded by the towns of Banska Bystrica, Zvolen, Trnava, and Trencin. Within this territory the insurgents had only one airfield and a motley collection of aircraft.

Tri Duby (Three Oaks) had been a training field and service area before the invasion and because of the swift advance of the Germans, the only aircraft available were those that happened to be at the field. Available aircraft consisted of three Avia B-534, two Bf-109G, four Letov S-328, two SM-84bis, two Ju-52, one Fw-189, two Fw-58, two Junkers W-34, six Praga E-39, two Klemm Kl-35D, two Caudron Ca-445, and thirty Fw-44, He-72, and Gotha Go-145.

Although this small air force was outclassed and outnumbered, they put up a valiant fight. They succeeded in damaging or destroying 12 German machines; 9 in air combat. Losses suffered in combat by the insurgent air force were only one machine, but losses on the ground due to bombing of Tri Duby soon reduced the force to a mere handful. Even so, this small force managed to support the insurgent army by destroying 94 vehicles, 5 tanks, and 77 enemy positions along with 2 locomotives and 16 railway cars.

Welcome help arrived on 17 September when 21 La-5FN aircraft of the 1st Czechoslovak Fighter Regiment flew in from the Soviet held territory to begin operations from Tri Duby. This force accounted for a further 36 enemy aircraft for the loss of only two of its numbers neither of which was in combat.

By 25 October, the overwhelming numbers of the Germans finally took its toll, and the Slovaks were on the retreat. Aircraft that could fly were evacuated to Soviet-held territory and all other were destroyed. The remaining Slovak forces moved into the hills to wage a guerrilla war.

The following drawings show some of the machines that took part in the fighting from Tri Duby

Fig. A: Letov S-328 'S-76' is finished in khaki green on the upper surfaces and pale blue undersides. The engine cowl is yellow as are the wing tips as shown in Fig. S. The code is white and the insurgent insignia (Fig. K) are carried on the tail and above and below the wings.

Fig. B: Letov S-328 'B-10' is finished as 'S-76' (Fig. A), but with the paint heavily worn. The cowl is khaki green and the Slovak insignia has been painted over in dark green on the tail and wings and replaced with the Soviet red star with a white outline. The wing tips are still yellow. The code is white. This machine escaped to Soviet-held territory and then, painted in Soviet markings, was flown back to Tri Duby to take part in the

fighting.

Fig. C: Letov S-328 'S-27' is finished as 'S-76' (Fig. A) except that it still carries the Slovak insignia (Fig. L).

Fig. D: Letov S-328 'B-7' is finished as 'S-76' (Fig. A) except that it has a yellow fuselage band. The code is white. One other Tri Duby Letov is known: this was finished as 'B-7' (Fig. D) except that the code was 'B-5' with the 'B' centered on the fuselage band.

Fig. E: Avia B-534 'S-12' is finished khaki green upper surfaces with pale blue undersides. The spinner and the band around the nose are yellow as is the band around the fuselage. The undersides of the wing tips are yellow which extends in to the wing struts. The aircraft carries the insurgent insignia (Fig. K) in six positions; the lower wing insignia being on the yellow. The code is white.

Fig. F: Avia B-534 'M-7' is finished as 'S-12' (Fig. E) except that it has no fuselage or nose bands. The code is white and the insurgent insignia is carried in six positions.

Fig. G: Avia Bk-534 is finished as 'S-12' (Fig. E) but without the yellow bands and wing tips. The insurgent insignia is carried in six positions, but no code is carried.

Fig. H: Messerschmitt Bf-109G '3' is finished in standard German dark green and black green segments on the upper surfaces with the dark green extending down the sides of the fuselage. The remainder of the fuselage is pale blue grey with dark green mottle. The undersides are pale blue. The insurgent insignia is carried in all six positions. The fuselage band is yellow and the number is white.

Fig. J: Messerschmitt Bf-109G finished as '3' (Fig. H) except that the upper fuselage is pale blue and dark green mottle with the wings in dark green and black green. The fuselage band and the Slovak insignia have been overpainted in dark green. The insurgent insignia are in the standard six positions. One other Tri Duby Bf-109 is known. It was finished as this machine but the yellow fuselage band was retained and the area between the band and the cockpit was painted over in dark green to form a wide band around the fuselage. No number was carried.

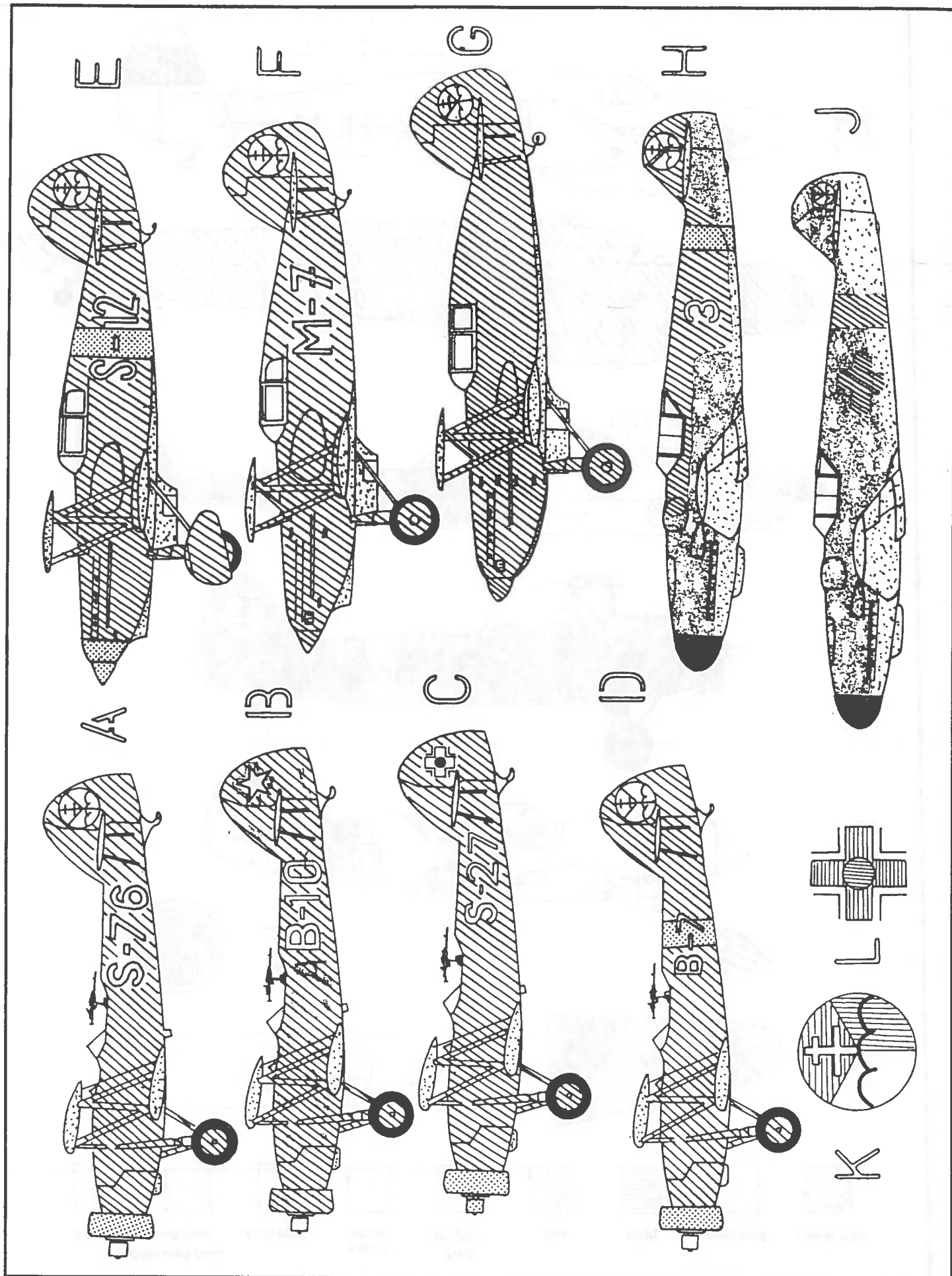
Fig. K: The insurgent insignia consists of the Czechoslovak insignia with a black line with three humps crossing the white and red segments and a Slovak two-bar cross in white on the blue segment.

Fig. L: The Slovak insignia used before the uprising was still carried on some aircraft when they were destroyed. It consists of a blue cross with white outline and a red circle in the center.

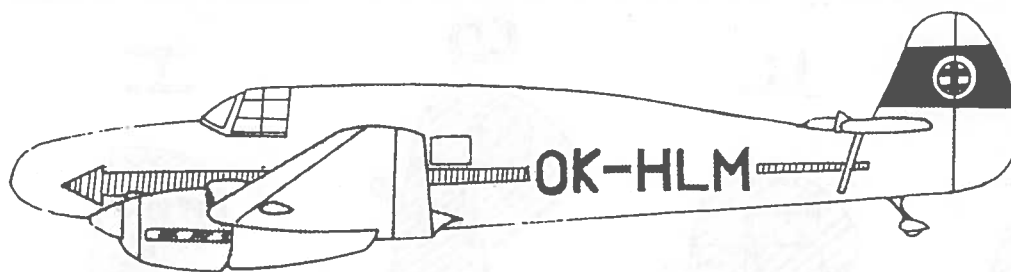
Fig. M: Focke-Wulf FW-58 'OK-HLM' in civil markings. It is finished in pale grey overall with a red flash on the fuselage. The registration letters are black. The early Slovak insignia (Fig. T) is carried on a blue band on the tail.

Fig. N: Savoia Marchetti SM-84 is finished in dark green on the upper surfaces and pale grey on the undersides. The band around the fuselage is white. No codes are carried and the Slovak insignia have been painted out with dark green and no new markings have been added.

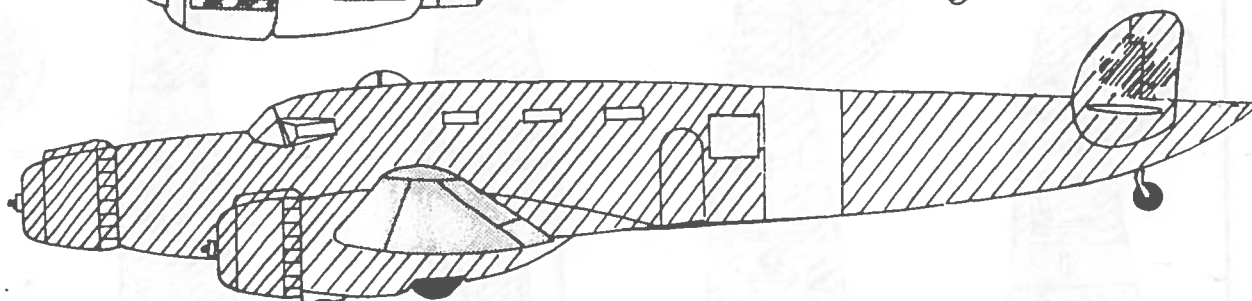
Fig. O: Focke-Wulf FW-189 is finished in standard German black green and dark green segments on the upper surfaces and pale blue undersides. The bands around the tail booms are



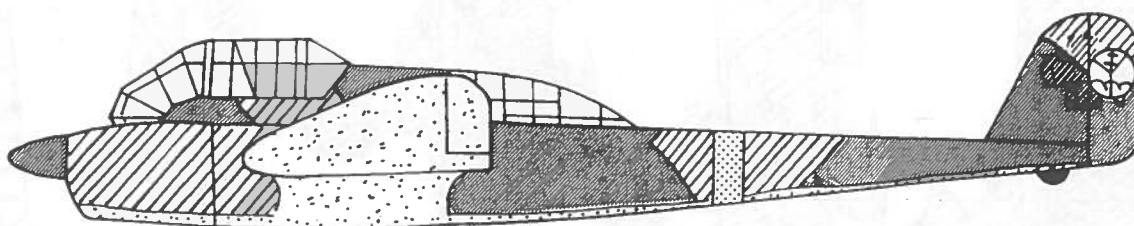
M



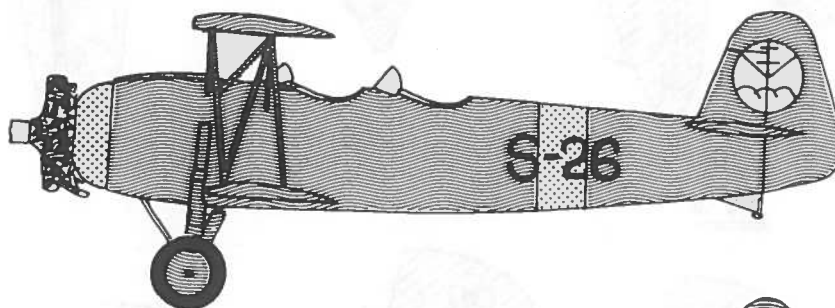
N



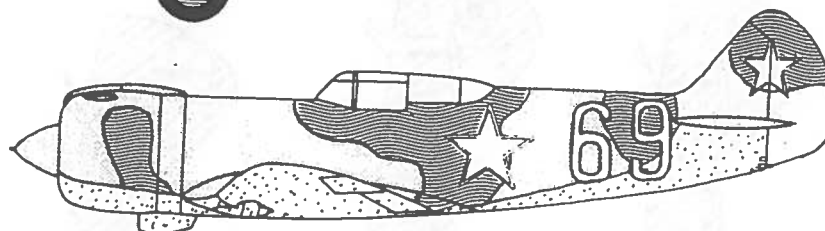
O



P



Q

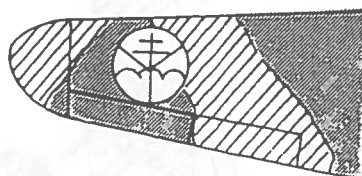


Wm

T



R



S



dark green



pale blue



blue



red



medium
grey



black
green



pale grey



dark green
over pale blue



yellow

yellow. The Slovak markings have been painted out in dark green and replaced with the insurgent insignia. The insignia on the wing is shown in Fig. R.

Fig P: Praga E-39 'S-26' is finished in mid-grey overall. The band around the fuselage is yellow as is the area just behind the engine. The undersides of the wing tips are also yellow. The insurgent insignia is in six positions and the code is black.

Fig. Q: Lavochkin La-5NF '69' is one of the aircraft of the Czechoslovak Fighter Regiment that flew in to support the uprising. It is finished in pale grey and mid-grey on the upper surfaces. Standard Soviet white-outlined red stars are carried on the fuselage, tail, and undersurfaces of the wings, but not on the upper surfaces. The undersides are pale blue and the number is white.

Fig. R: The upper surface of the FW-189 (Fig. O).

Fig. S: The underside of the wings of the Letovs (Figs. A to

D).

Fig. T: The early Slovak insignia consists of a white-outlined red disc with a blue two-bar cross.

All the aircraft shown in these drawings were destroyed during the uprising. Their fates were as follows: On 10 September, a German air attack on Tri Duby destroyed S-76 (Fig. A), S-27 (Fig. C), SM-84 (Fig. N), and FW-58 (Fig. M), along with one of the B-534, two Ju-52, one Bf-109E, and the other SM-84. The Bk-534 was lost on 8 September when the pilot became lost in a fog and flew into a mountain. Letov S-328 B-7 was on a mission to pick up bombs from an abandoned airfield when it was attacked and shot down by several Ju-87s.

Bob Massey (SAFCH #364), 9 Worrall Ave., Arnold, Nottingham, NG5 7GN ENGLAND

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Le Potez 25, Collection Histoire de l'Aviation No.1. 256 pages, A-4 size, 600 photos, 16 pages of drawings, and 50 color drawings. Hardbound. Published by Avions and available from: Lela Presse, 39 Rue A. Briand, 62200 Boulogne/Mer, France. 365 francs + 30 francs postage.

There is no doubt about it. This is the small-air-force book of the year (if not the decade). Of course, to earn such recognition the book must be technically excellent, and this book meets this requirement: high-quality glossy paper, crystal-clear reproduction of the vintage photos, superb 1/72-scale drawings, and beautiful color side-view drawings. However, the real strength of this book lies in its conception. It is the cooperative effort of many authors (13 are listed on the title page), many of whom have contributed material to the pages of SAFO including Antonio Luis Sapienza, Kajetan Przemyslaw Musialkowski, and Wojciech Sankowski. These authors have combined their talents to produce detailed accounts of the service of the Potez 25 around the world from 1925 to 1945. Not unexpectedly, the book begins with a chapter (31 pages) on the development of the Potez 25 and its many variants. This is followed by chapters on the service of the Potez 25 in Metropolitan France (24 pages), civil Potez 25 (6 pages), the 1933-34 grand tour of French possessions in Africa (6 pages), the Potez 25 in schools (7 pages), and the Potez 25 in Naval service. The next few chapters, while not on small air forces, cover areas close to the heart of many SAFCH members: The Potez 25 in the Levant (11 pages), North Africa (14 pages), Indochina (14 pages), the French Colonies in Africa (14 pages), and in Free French service (one page). In these chapter are found descriptions of the Potez 25 in action against the British in Syria and Madagascar, against Thai and Japanese in Indochina.

We have now reached page 141 and if the book were to stop here, it could still be highly recommended. However, now the fun really begins with a section titled "En Service dans le Monde: Les Potez 25 Etrangers" First comes a short section covering three countries about which little is know about the service of the Potez 25: Afghanistan, Turkey, and the USSR. This is followed by chapters on: Ethiopia (4 pages, 11 photos), Finland (one page, 4 photos), Greece (4 pages, 16 photos), Guatemala (one page, 4 photos), China and Japan (2 pages, 5 photos), Paraguay (6 pages, 23 photos), Poland (8 pages, 24 photos), Portugal (2 pages, 6 photos), Romania (8 pages, 28 photos), Switzerland (3 pages, 8 photos),

Uruguay (3 pages, 11 photos), Yugoslavia (14 pages (43 photos), Croatia (4 pages, 12 photos), Brazil(4 pages, 9 photos), Spain (3 pages, 6 photos), and Estonia (2 pages, 4 photos).

The drawing section includes 1/72-scale drawings for 9 variants, two 2-page cutaway drawings, 2 pages of side-view tone drawings of Polish Potez 25, two paintings of civil Potez 25, and 16 pages of color side-view drawings: French (23), Romania (2), Estonia (1), Greece (1), Portugal (1), Spain (1), Finland (1), Swiss (2), Uruguay (1), Paraguay (2), Brazil (2), Ethiopia (1), Croatia (1), Poland (4), and Yugoslavia 93).

Unfortunately, Avions has chosen not to employ the parallel text in french and English they used so successfully in their book on Swiss Bf-109s, and the text is entirely in French. I suppose that the use of a dual language would have increased the size and price of the book to an unacceptable level. However, it should have been possible to include captions in English. There's not much left of the French I took in grade-school back in 1945/46, so I will have to buy a French/English dictionary; the value of the information in this book should make the time and effort in translating selected parts of the text worth the trouble. I suspect that if the publisher made available a separate, inexpensive translation of the text it would greatly increase the sales of the book.

They only readily available kits of the Potez 25 are 1/72-scale vacuform kits by Broplan of the Lorraine- and Jupiter-powered versions. These should allow the modeler to build the Potez 25 in the markings of a large number of countries. How about it Blue Rider, could we have a sheet for the Potez 25, especially the lion and script for an Ethiopian machine? Unfortunately, conversion to the TOE version looks challenging and conversion to the Renault-powered monoplane used in Romania looks absolutely daunting.

The Avions book on Le Potez 25 is unreservedly recommended to all small-air-force fans, and it is an absolute requirement for anyone interested in the aircraft of the 1930's and the wars and conflicts of the period immediately preceding the start of WWII and the more obscure campaigns of the early part of that war.

HISTORIA GRAFICA DE LA FUERZA AEREA MEXICANA, Hector Davila Cornejo, Estrategia Aeronautica e Industrial, S.A. de C.V., Tepeji #73A, Colonia Roma Sur, C.P. 06760, Mexico D.F., Mexico. (See SAFO #79 for ordering

information).

The editor of America Vuela magazine, Sr. Hector Davila has amassed, together with the help of long-time SAFO contributor Santiago Flores, a truly magnificent array of photos of Mexican service aircraft from the dawn of aviation in that nation to the present.

Some 100 color and not fewer than 264 black-and-white prints (not to mention full color presentation of all 54 authorized FAM unit insignia) are accompanied by Spanish-language captions and a current FAM Air Order of Battle, list (by type) of all types used over the years, and a glossary of FAM terms and acronyms. The photo selection and reproduction is very good and includes a considerable number that have probably never been published before.

There are a lot of surprises in this 91 page, soft-bound book, and it is difficult to select the most outstanding. On page 11, we see an excellent photo of a TNCA Serie "A" biplane (6 A 19) that had the 150-hp HispanoSuiza engine. The aircraft bears the early shield type of national insignia on the upper side of the lower wings, but not on the upper main plane! Another photo on the same page shows the number 8 of the Serie "A" series with the astonishing information that it was constructed by TNCA from the remains of a Kantner-Moisant/Morane-Saulnier type and with an Anzani engine. In this case, the "shield" type national insignia is on either end of the upper main-plane but also on the rudder. On page 14, we learn that during the Carranza regime, the service adopted red/white/green roundels and vertical rudder stripes, and an example is shown of a TNCA Serie "B" thus marked in-flight. On the same page, we see a Farman F.50 twin-engine bomber in-flight (number 4) with the tricolor Mexican colors presented on the extremities of the lower mainplanes in wide bands, similar to those used by Italy in Wwi. The remains of a TNCA Serie "A" on the same page show that the aircraft had similar bands on the outer wing extremities also.

The color photos will hold many pleasant views for modelers. On page 23, two Escuela Militar de Aviacion Boeing-Stearman PT-13s (s/n EPS-98 and EPS-100) are shown in-flight in a beautiful yellow color scheme with blue wing-tips, horizontal tail tips and blue "lightning" cheat-lines the length of the fuselage. I was surprised to see the triangle national insignia on the upper left wing only, with the individual serial repeated on the upper right wing panel.

Page 29 reveals an in-flight black-and-white photo of a Bristol F.2B Fighter with some sort of special insignia on the mid-fuselage while page 46 shows a color set of photos of a camouflaged Rockwell 500S Shrike Commander of the Escuadron de Bombardeo Ligero (or possibly the Escuadron de Reconocimiento Fotografico, it is not clear) ETL-1267 and a close-up of the underwing rocket rails installed!

Color photos of Pilatus PC-7s in a variety of special schemes (including sharkmouth and python-mouthed examples) accompany similarly adorned T-33As. On page 53, a color in-flight photo shows T-33A JE-029 of EAJP 210 bearing a special eagle motif on the nose and "29" in large numerals on the air intake, blue tip tanks, and a star-burst on the vertical tail in blue. A fascinating shot of a T-33A (marked simply as 053 on the vertical tail) of EAJP 212 at Ixtapex shows a spiders web on the vertical fin and red fin tip. There is a rather fuzzy (but rare) view of one of the two FAM Schweizer SA 2-37A 'stealth' observation platforms in-flight and a variety of color shots of FAM Northrop F-5E and F-5F aircraft on the facing page.

There are few odds-and-ends glitches here and there, and sometimes the captions do not seem to have been inserted to accompany the photos, but all are numbered, so they are easy to match up. The table listing aircraft operated by the FAM over the years seems comprehensive, and makes some sense (at least for this reader) of some of the indigenous designs that surfaced from time to time over the years.

There may be a more definitive book on the history of the FAM in the future, but in the meantime, this one will certainly fill many a void.

Dan Hagedorn (SAFCH #394), PO Box 682, Centreville, VA 20122-0682, USA.

Os Bombardeiros A-20 no Brasil, Gustavo Wetsch, INCAER (Instituto Historico Cultural da Aeronautica, Catalog No. 3032, number 9 in a series, ISBN 85-86155-01-2. (1996) (Cost \$25.00 plus \$5.00 postage from the author: Gustavo Wetsch, Rua Maxaranguape 910/702, 59020-160 Natal RN, Brazil.

This 286 page, softbound book on a single series of only 30 (or 31, if you wish to be a purest) A-20 variants that reached Brazil via Lend Lease during WW2, will certainly stand as the definitive work on this subject for all time. A retired Brazilian Air Force officer, Sr. Wetsch is an excellent researcher and, although the text is of course in Portuguese, he supports the text and annexes with 81 black-and-white photos and five side-view drawings. Three of the sideview drawings, unfortunately in black-and-white, illustrate the three primary schemes worn by the FAB A-20 fleet during their tenure, while other illustrations (also in black-and-white) show the unit insignia of the operating units. He lists the fate of each aircraft, virtually all crews that flew the type in FAB service and devotes one chapter to colors and markings. It is interesting to note that, late in the service life of the A-20 in FAB service, under the FAB designation system, the surviving examples were redesignated as R-20s. This reader was surprised to learn that, by that time, virtually all of the surviving aircraft had been 'named' (e.g. R-20 6072 was "Trumais"). Earlier, the aircraft had been designated as RA-20Ks and had apparently carried the same names (which appear to have been tribal names unique to Brazil). Other photos show FAB A-20s with less formal nicknames, which was also a surprise, including A-20K 6069/69 "Gaviao". Earlier photos show the rather crude over-painting of U.S. national insignia and application of two-digit

codes on the vertical fin and forward fuselage of most aircraft c.1948 and earlier. On page 57, a photo shows A-20K 44-169 with FAB national insignia on the fuselage but the USAAF serial '4169' still painted on the vertical fin, as of 2/11/44. The only slight criticism that this writer can mention is that the author didn't cite the single RA-20A (USAAF s/n 40-113) that was supplied to Brazil as a training aid and the single Boston III (RAF serial AL336) supplied in 1941 for the same purposes. Dan Hagedorn (SAFCH #394), PO Box 682, Centreville, VA 20122-0682, USA.

Os Bombardeiros A-20 no Brasil (A-20 Bombers in Brazil) by Gustavo Wetsch. This first book by a former Brazilian Air Force officer was published as a private venture. With 288 pages, 78 photos, 4 tables, 5 side views, 3 drawings, and 2 maps, it's 6 chapters give the complete story of the A-20 in FAB service. From the glory days until it's use in photo-recon, and it's retirement, the crashes, the deaths, the joy and the proud. Everything is written in an easy to ready style (In Portuguese, of course) and includes the story and fate of each plane. With informations on heraldry, colors, and camouflage which makes it a must for everyone interested in Brazilian military aviation. The book may be acquired from the author: Gustavo Wetsch, Rua Maxaranguape 910/702, 59020-160 Natal, Rio Grande do Norte, Brazil.

The author is now working on a second book dealing with the Brazilian P-40s.

Sergio Luis Dos Santos (SAFCH #1202), Rua Jardim Botânico. 647/301, 22470-050 - Rio de Janeiro - RJ, Brazil

[Editor's note: Sr. Wetsch sent the SAFCH a copy of his book for review. Unable to read Portuguese, my opinion has to be based on the photos, drawings, and tables. On the bases of these, I can wholeheartedly second the recommendations of the two reviewers above. This is a book that will send any red-blooded modeler of the a/c of the small air forces scurrying to the storage closet to see if the Matchbox kit of the A-20G is still there. Also certain to get the modeling juices flowing is the table listing a/c in BAF service in 1944: 7 Consolidated PBV, 18 Lockheed A-28A, 5 NA B-25, 2 Douglas B-18, 40 Curtiss P-40, 14 Vega PV-1, 21 Vultee A-31, 13 Vultee V-11, and, last but not least, 7 Boeing F4B4. What a great theme entry for your next contest entry.

This book is a must for all enthusiasts of Latin American Aviation. Those with only a peripheral interest in this region of the world should still give careful consideration to obtaining this book, if not to make a model of a Brazilian A-20, at least to encourage the author to continue this series with the P-40 book.]

Service History of the RoCAF F-100, Clarence J. P. Fu.

Available from Aviation Usk, 602 Front St., Box 97, Usk, WA 99180, USA and The Aviation Bookshop, 656 Holloway Rd., London N19 3PD, England.

Since one of the purposes of the SAFCH is to promote publication of information on the small air forces, it was with the greatest satisfaction that I read the dedication the author wrote on the inside of the cover of my review copy: "Without SAFO, this book could be only a dream!". Thanks for the acknowledge, Clarence, but even greater thanks for the excellent book on an aircraft from a country that is poorly represented in aviation literature.

Technically, this book is first-class: 86 pages on high-quality glossy paper sturdily bound between

colorful soft covers. The text is in Chinese, but the photos and drawings are captioned in Chinese and English. The glossy paper allows excellent reproduction of the photos, which is important since this is essentially a photo book. There are 23 color photos of RoCAF Super Sabres including the front and back covers, and 12 color photos of squadron and unit badges. I made no attempt to count the b&w photos since there are so many of them, but the first section, pages 12-37, describes chronologically, in text and photos, the introduction and service history of the F-100A, F-100F, & RF-100A on Taiwan. (Included is a photo of a MiG-21 in RoCAF markings.) From page 40 through 74, the author does something I've never seen tried before: He illustrates each and every RoCAF F-100 with a photo, four to a page. When a photo could not be found for a particular a/c (26 out of 137 a/c) the space for the photo is left blank. As to be expected, the quality of these photos varies. Most are excellent views of the a/c on the flight line or in the air. Others are of the a/c in a disheveled condition after an accident, or even worse, after being scrapped. And, some are either of very poor quality, or the a/c appears in the background, or the view show only a part of the a/c with the codes. This is to be expected given the author's almost impossible objective. [Editor's note: I wonder how well this objective could be achieved with other aircraft, e.g. the Finnish Buf-falos.]

The penultimate section, pages 74-83, consists of 14 side-view drawing (again accompanied by photos) of the markings carried in by the F-100s in RoCAF service. A final 2-page section is a review of the kits of the F-100 in all scales. Most of these are F-100Ds, but AMT did make a 1/72-scale kit of the two-seat F-100F. This is not as bad as it seems since all but four of the RoCAF F-100As had the F-100D type vertical tail. I never quite realized how much difference there was between the F-100A and the RF-100A. Now I wish I had paid more attention to the Ventura conversion kit when I had one, but I never dreamed it could be build in small-air-force markings.

Our friend, and fellow SAFCH member, Clarence Fu has produced an outstanding book that can serve as a pattern for anyone considering doing a book on a single a/c type in a single country. If you are an enthusiast of the Super Sabre or of the RoCAF, this book is a must. Other will enjoy the unique, and informative, treatment. Any one out there with unpublished photos of RoCAF F-100s should contact Clarence (Clarence Fu, PO Box 112-129, Taipei, Taiwan). Who knows, perhaps you can fill one of the blank spaces or upgrade one of the photos included in the book. Perhaps, then Clarence can consider a second edition, maybe even an English edition.

Wings over the Pacific: The RNZAF in the Pacific Air War, Alex Horn. 228 pages, 18.5 cm by 26 cm, softbound. 130 b/w photos and several maps. Random Century NZ Ltd., 18 Poland Road, Glenfield. Auckland 10, New Zealand, 1992. Price about NZ\$35.00.

To quote from the book cover: "This is a comprehensive, but informal, history of the RNZAF in the Pacific during World War II. Using his own experiences and those of other pilots, navigators, wireless operators, air gunners, and groundcrew personnel, Alex Horn recreates the war years, enabling readers to feel that they too are in the cockpit or on the islands."

The role of the RNZAF was relatively minor when compared to the other Allied air forces in the

Pacific, and covered a fairly small geographical area (mainly around the Solomon Islands and Bismarck Archipelago). Even so, the story is rich and varied and well worth getting to know better. Several chapters of the book deal with the author's own experiences during the war (among other things, he did three tours in Corsairs). Interlaced with these are more general chapters covering the various units of the RNZAF, being based on a mix of archive information and personal anecdotes. About half the photos show aircraft. Those depicted include Tiger Moth, Harvard, Oxford, Vildebeeste, Hudson, Kittyhawk, Ventura, Anson, Dakota, Catalina, and Walrus. This is a very readable book, especially when compared to the dry-as-bone, official history published in 1955. All in all, it is likely the best source on the subject and is recommended without reservation. Leif Hellstrom (SAFCH #786), Servitutsvagen S-145 59 Norsborg, Sweden.

De Havilland Vampire: The Complete History, David Watkins. 272 pages, 20 cm by 27 cm, hardbound. 230 b&w photos, 20 drawings and sketches. Sutton Publishing Ltd., Phoenix Mill, Thrupp, Stroud, Gloucestershire, England GL5 2BU, 1996. Price £25.00.

The title really says it all: this is the history of the Vampire from 1942 to date. There are chapters on airframe and engine development, and on each main version and their use by the RAF and FAA. Appendices include full production lists for each of the British factories producing Vampires.

The part most relevant to SAFCH members is the 60 pages under the heading Foreign Sales. These give a well-rounded, well-researched summary of the Vampire's service in some 30 countries, other than the UK. The length of the entries vary from one or two paragraphs (e.g. Katanga and Saudi Arabia) to four or five pages (Australia and Canada).

Photos of non-British aircraft include Australia (5), Austria (2), Canada (4), Chile (1), Dominican Republic (1), Egypt (3), Finland (2), France (5), India (3), Indonesia (1), Iraq (3), Italy (3), Japan (1), Jordan (1), Lebanon (2), Mexico (2), New Zealand (4), Norway (3), Portugal (2), Rhodesia (2), Saudi Arabia (2), South Africa (3), Sweden (3), Switzerland (6), Syria (2), Venezuela (2). There is no doubt in my mind that this will become the standard reference to the Vampire, and deservedly so.

Leif Hellstrom (SAFCH #786), Servitutsvagen S-145 59 Norsborg, Sweden.

Middle Eastern and African Air Arms, Ian Carroll, 138 pages, 14.4 cm by 21 cm, softbound. Two colour and six b&w photos. MACH III Plus. PO Box 222, Uxbridge, Middlesex, England UB10 0AX, 1995.

This is yet another publication consisting of nothing but lists of aircraft serials, of which we have seen so many in recent years. The intention of this booklet is to cover all types in current Middle Eastern and African service.

For each country, a brief Order of Battle is given, followed by lists of individual aircraft. Generally, there are four columns which, when available, seem to provide (no explanation is given): serial number, construction number, remarks, and last-spotted date. The remarks may give a current unit or a w/o date. It is rare, however, that all columns are filled in; often there is only a list of serials.

One gets the impression that all available sources have been vacuumed for information, which has then been presented without much attempt at critical analysis.

Leif Hellstrom (SAFCH #786), Servitutsvagen S-145 59 Norsborg, Sweden.

Alae Supra Canalem: Wings Over the Canal. The Sixth Air Force and the Antilles Air Command, Dan Hagedorn. 9 in. by 12 in, hardbound, 208 pages. Turner Publishing Company, PO Box 3101, Paducah, KY 42002-3101, USA. \$39.95 plus \$5.00 shipping & handling.

I've only seen the broadside, but here's what they say it includes: Beginnings, The Inter-war Years, Into the 1930s, Three Turbulent Years of Expansion; The Caribbean Air Force and the Coming of War; Antilles Air Task Force, Antilles Air Command, and other Commands; Wings, Groups, Squadrons and Aircraft; Sixth Air Force Order of Battle 16 June 1943; Distribution of US Army Air Forces and US Navy Aircraft Caribbean Sea Frontier 11 December 1942; USAAF Units Assigned to Antilles Air Command as of 16 June 1943; APOS's, Airfields and Code Names; Known Casualties due to Aircraft Losses.

Aviafan is a soft-cover, A-4 size, 56-page book of 1/72-scale plans from Russia. Aircraft covered are the Curtiss Hawk 75, Henschel Hs 129A, North American F-86, Bell UH-1, and Northrop T-38/F-5. Each a/c is covered in a couple of pages of text (Russian), several photos, a cutaway drawing, and series of side-view drawings showing the development of the type. The major part of the book is the drawings with vary from 2 pages for the Hawk 75 to 12 pages for the T-38/F-5. All variants are covered in the scale drawings; for example, the Sabre covers the F-86A/D/K/F/H versions; The Northrops covered are the T-38A/B, F-5A/B/C/E/F, CF-5A/R/D, and NF-5A. These scale drawings are of the highest quality and include many partial views of details. All scale drawings are devoid of markings and no cross sections are included. However, the color cover has color side-view drawings of 3 Luftwaffe Hs-129 as well as color drawings of the cockpit interior and the instruments on the inside of the engine nacelles.

This book is highly recommended to the collector of scale drawings and to anyone wishing to have unmarked drawings to which to add his/her own color schemes.

[Editor note: A small number of AVIAFAN is available from the SAFCH Sales Service.]

WWI Aircraft. I won't ever try to translate the title of this series of 72-page, A-4 size books from Russia, but they consist of a page of text (in Russian) and photos and a page of 1/72-scale drawings for each a/c type covered. In addition, there are 8 pages of color side-view drawings (one drawings for each a/c covered in the book).

Volume I cover fighter aircraft of the Allies (Bristol Scout, M1C, & Fighter; Vickers FB.19; De Havilland DH.2 & DH.5; RAF FE.2, FE.8, & SE.5a; Sopwith 1.5 Strutter, Pup, Triplane, Carmel, Dolphin, & Snipe; Ansaldo Ballila; Mocka Mb.6; Sikorsky S-16; Hanriot HD.1; Caudron R.11; Morane Saulnier N; Nieuport 10, 11, 17, 27, & 29; and Spad A.2, VII, XII, & XIII). Volume II cover fighter aircraft of the Central Powers (Albatros D.II, D.III, & D.Va; Pfalz D.III & D.XII; Roland D.II & D.VI; Siemens Shuckert D.III; Fokker E.III, D.II, Dr.I, D.VI, D.VII, & E.V; Halberstadt D.II; Junkers D.I; Oeffag D-III; Aviatik D-1; Hansa-Brandenburg D-I; and Phoenix D-IIa). The color side-view drawings are very well done and are well printed on glossy paper.

If reading this list gives you a sense of déjà vu, wait to you see the scale drawings - they are exact copies

of the drawings by Carrick and Yeoman in the Harleyford book "Fighter Aircraft of the 1914-1918 War". The only exceptions are the drawing of the Caudron which came from the Harleyford book on Reconnaissance Aircraft and the two drawings for the Russian a/c whose origin I cannot identify.

This book can be recommended to anyone who does not have the Harleyford book, but, if you're a stickler for accuracy, remember that some experts have been critical of the scale drawings in the Harleyford books.

"I recently purchased the new Squadron/Signal #1162 on the Polikarpov I-16. This is generally an excellent booklet, but I was disappointed with their information on the exhaust systems employed on these stubby fighters. I had hoped that this publication would correct the mistakes of many past articles; unfortunately it did not. On page 10, the author, referring to the modified TsKB-12bis or prototype of the type 5, wrote "the internal exhaust collector ring was replaced with eight individual exhaust stacks with scalloped exhaust ports in the cowl". All versions of this aircraft used a nine-cylinder engine. I have been researching this aircraft for the past several years and, (discounting the drawing in Air Enthusiast #1 showing the two port cylinders twined together) what I have found to be the systems used are illustrated in the enclosed drawing.

"There were a few other places I would also differ with what the author wrote, but most of these regard service in Spain during the civil war. For instance, (p.18) "1st Mosca squadron which was based at Alcala de Henares and the 2nd Mosca squadron based at Camposoto." "On their first combat mission, 15 November 1936,..." This group, the predecessor to the 1st Moscas, was an expanded squadron of 18 aircraft which had arrived at Alicante on board the Soviet Ship 'Kursk' on 25 or 26 October 1936 after leaving Sevastopol on 21 October. The whole 18 aircraft were under the command of Captain Sergei Tarkhov known in Spain as 'Antonio'. Twelve of the aircraft were based at Alcala de Henares with Vladimir Bocharov and Petr Kuznetsov each leading a detachment of 6 aircraft. A third detachment was based at a field near Guadalajara and led by Konstantin Kolesnikov. Tarkhov's squadron flew their first mission on 6 November, engaging Junkers Ju 52 bombers over Madrid. Tarkhov was shot down over Madrid on 13 November while attacking a Ju 52. The very next day, Vladimir Bocharov was K.I.A. and Kolesnikov assumed command.

"P.19 says, "On 17 November, an I-16 of the 2nd Moscas was shot down." The pilot of this aircraft was Dmitrii Pavlov (K.I.A.). He was not from the 2nd escuadrilla, but instead from the detachment stationed near Guadalajara. What would later become the 2nd and 3rd Moscas, were not formed until Spring 1937 under command of Grigorii Pleshchenko and Aleksandr Minaev.

"P.23 lists two shipments of I-16s, one in May 37 (21st with 17 a/c) and a second in July 37 (8th with 14 A/c) "used to form the 4th Moscas". Basically, if there was a 4th Moscas at this early date, then it was the escuadrilla formed by Valentin Ukhov and sent to Santander in mid June 1937. This unit was disbanded (or disseminated) in October 1937 and only restarted in late November 1937 as the 4th Moscas under command of Manuel Zarauza. But what is missing from this listing, is the third shipment of 10 August 1937 with 62 I-16s on board the 'S. Augustin'. These were used to replace losses in the other escuadrillas and to form a 5th Mosca es-

August 1937 with 62 I-16s on board the 'S. Augustin'. These were used to replace losses in the other escuadrillas and to form a 5th Mosca escuadrilla.

"P.32 "...activating the 6th Moscas in July 37" should read July 1938 under command of Francisco Merono.

P.33 "A total of 24 Wright SGR-1820-f54 engines found the way to Spain, but only twelve were fitted to super Moscas, the rest held in reserve." Besides the aircraft of the 4th escuadrilla de Moscas, at least 2 other Super Moscas received this engine, CM 225

flown by Manuel Zarauza then CO Grupo 21 and CM 249 flown by Jose Ma. Bravo 2nd in command Grupo 21. The author also states that "When the unit (4th Moscas) was disbanded in December of 1938, the Wright-Cyclone equipped I-16 Type 10s were spread among the other remaining squadrons." This is simply not true. The 4th Moscas, or as they were better known 'Nariz Fria', only ceased to exist after it's aircraft were destroyed on the ground on 6 February 1939 at Vilajuiga airfield. It's last commander Antonio Arias Arias putting the torch to his own 'beloved' CM 260 to keep it

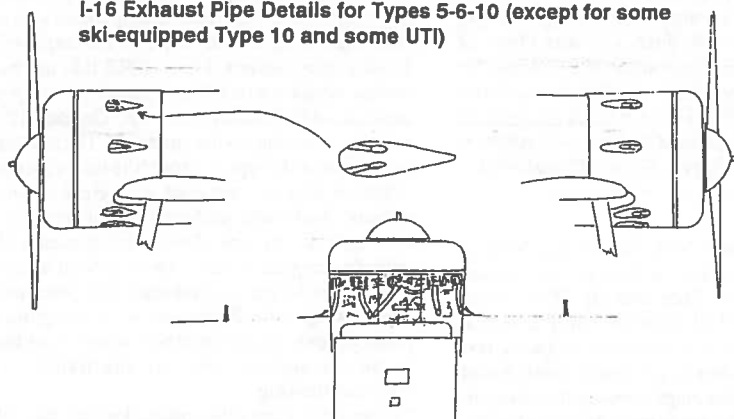
from falling into enemy hands.

"Last but not least, in the color drawings the 'unusual' emblem on the tail of the 4th a/c down, is really not so unusual as it is a painting of the Soviet pilots wings of that period.

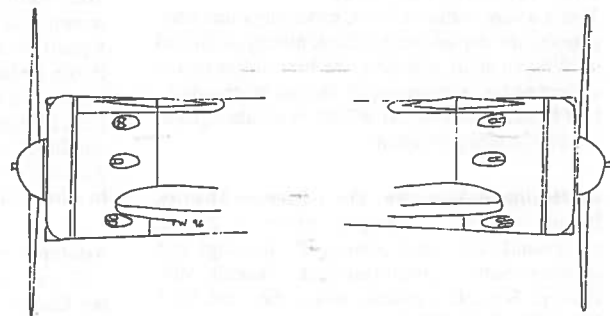
"I hope I have not bored you with all this, but even with the errors I pointed out, it is a booklet still worth buying as it defines the many versions and covers the Zveno system very well."

Paul Whelan (SAFCH #553), 97 James Street, Bloomfield, NJ 07003, USA

I-16 Exhaust Pipe Details for Types 5-6-10 (except for some ski-equipped Type 10 and some UTI)



Top of cowling removed to illustrate placement of exhaust tubes. Note how tubes from top cylinder and from first on port side come together to allow exit through top left exhaust port in cowling



Exhaust pipe details for Types 17-29. Ports in cowling on these models were reduced from the original eight of the types 5-10 to six with five tubes through three cowling ports on port side and four tubes through three cowling ports on starboard side.

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"Gaceta de la Aviacion is the official publication of the Academia de Historia Aeronautica del Uruguay. Mr. Nelson Acosta provided the enclosed copy for review in SAFO. Mr. Acosta, an aeronautical historian and member of the academy, is the author of the series on Uruguayan naval aviation that has been appearing in 'Gaceta'. In the issue at hand is part XII of this series - a study of the SNJ in Uruguayan Navy service. This article includes 7 photos and 3 profiles (drawn by the author of this letter) which depict the three basic color schemes used by Uruguayan Navy SNJs.

Other article of potential interest to SAFO readers are: A description of flying, during 1967 and 1970, aircraft confiscated from smugglers (Lockheed Ventura N216U and Model 18 'Loadestar' N69415 - the latter is preserved in our Aeronautical Museum). An x on Pluna's 707-387B CX-BNU (c/n 19239) which was purchased last August by the Brazilian Air Force as a source of spare parts for its fleet of 707s. An article about the first Uruguayan cargo airline 'Taci Ltda' which was born and died in 1947 including photos of Lodestar, C-47, Sikorsky VS-44A, Fairchild C-82 Box Car (VS-44A CX-AIR was involved in smuggling arms to revolutionaries in Paraguay).

"Gaceta" is not sold in newsstands, but Mr. Acosta has offered to assist SAFO readers interested in 'Gaceta'. His address is: Nelson P. Acosta, Avda. Uruguay 1638, Apto 601, 11200 Montevideo, Uruguay.

"P.S. For 1997, the FAU is expecting to receive two UH-1H and 6 Westland Wessex. The latter are from RAF stock currently stationed in Hong Kong."

Eduardo Luzardo (SAFCH #1383), Picardia M267 S.37, 91001 Barros Blancos, R.8 KM. 22500, Uruguay.

Força Aérea #3: "FIDAE 96" The Brazilian presence and other countries at 9th Feria Internacional del Aire y Espacio in Chile, with color photos of Cessna 208 Caravan I in FAB service. "Os Tigres Afiam suas Garras", "Cacas da Liberdade e Tigres", "Os Tigres da Northrop no Brasil", and "Vida Nova para os Tigres" are four articles dealing with the modernization of the F-5, it's story in Brazil, and installation of new equipment to improve them including several color photos "A Flecha do Poti" the story of 2/8 GAv and the operation of Helibras HB 350 Esquilo. Beautiful large-sized color photos, color profiles of Neiva T-25C Universal and Helibras HB 350 plus 2/8's badge. "Os Olhos dos Pracinhas" the story of 1st ELO in Italy at WW2 (Primeira Esquadriha de Ligacao e Observacao). Rare archival photos, color side views of Piper Cub L-4H white 9 and white 2. White 9 had a pinup girl on right side and the name "Luly" on left side, being a very uncommon marked plane even in today's FAB. "Fulcrum" a FAB pilot gives his impressions of flying the MiG-29 in Russia. "Salvando e Lutando sobre a Cidade Maravilhosa" the operations of CGOA from Rio de Janeiro, operating helicopters as VIP transport, rescue of drowning people at beaches, police operations, wounded rescue, etc. with color shots of the choppers. "Operacao Opera" the Israeli attack on the Iraqi nuclear plant in 1980, color photos and side views.

Força Aérea #4: A Força aos 80: Brazilian Navy Aviation completes 80 years. An interview with Força Aeronaval's commander Contra Almirante Carlos Alberto Pimentel Mello. Os Trujillo Boys! Brazilian Pilots at Republica Dominicana's Civilian War 1948-50. Archival photos of planes pilots, color profiles of a P-51, Mosquito, and Beaufighter. Nas Colinas de Taubaté: A report about COM-

AVEX (Comando de Aviação do Exército) includes color shots of the Brazilian Army helicopters, it's bases and a list of the models operated. Conflito Condor: The aerial war of Peru against Ecuador in 1995. Color shots of Ecuadorian planes and aces, plus color views of Ecuadorian Mirage F-1J and LAI Kfir Cs, and Peruvian Su-22 and Cessna A-37 B, plus a map of the conflict area. Simples, silencioso ... soberbo! A good report about Embraer's new jet airliner EMB145. Several color shots and X-ray. Also highlights it's future use in military service. Caçadores de Submarinos: The operations and planes from 1 GAE (Primeiro Grupo de Aviação Embarcada) Sub Hunters Color shots and side views of Embraer EMB-111 and P-16 (FAB designation of S-2 Tracker). A FAB dos Andes: A profile of Força Aérea Boliviana. Color photos and badges, a listing of the Air Units and FAB's aerial power. Bonjour Monsieur Mirage! Every year Armee de l'Air planes goes to USA for Red Flag. When returning, they pause in Recife, Brazil. This year upon a request of Estado Maior da Aeronautica, the French did a demonstration of ADM Mirage 2000. This report shows the impressions of flight with two Mirage 2000 in Brazilian hands. Several color shots. Águias Astecas sobre as Filipinas: Mexican Thunderbolts at Second World War. Several archival photos and 2 color profiles. Força Aérea has two new sections: Notícias news about military aviation in Brazil and the world. Heraldica: Heraldry! In this issue the badges of 3 EMRA, in color. I hope Força Aérea will be released more frequently in 1997 and the new section about Brazilian Military Aviation's badges is another must for SAFO readers. Who knows, in the future some book dealer in Europe or USA could have this magazine?

Força Aérea has had to increase their price; it is

Small Scale Aviator, 4 times a year. Athena Books, 34 Imperial Crescent, Town Moor, Doncaster DN2 5BU, South Yorkshire, England. Subscription: UK £16.50, Europe £18.50, RoW £25.50 (Air Mail). Our friend Glenn Ashley of Delta Aviation Publishing has begun a magazine "for 1/72nd scale aircraft modellers". The premiere issue comes in 32 A-4 size pages on a medium-grade paper which allows reasonably-good reproduction of the many photos.

Articles in this first issue include: (1) "Operation Locusta Tornado" (3 pages) describes the construction and painting of an Italian Tornado as used in the Gulf War (one photo of a/c and 2 of the model). (2) "Supermarine Spitfire/Seafire Variants: A modellers guide to building the different version of this" (4 pages) lists the various kits, conversions, extra detail parts, decals, and a small set of selected references. A table details the differences between versions (19 characteristics for each of 27 variants). There are 2 photos of models and one of an a/c. (3)

Model Art. This small (24 pages 15 cm by 21 cm), but informative, magazine is being published by SAFCH member Nenad Niklusev (Bulevar Veljka Vlahovica 56/10, 23000 Zrenjanin, Serbia). Printed by a lithographic process, the photos are of little

Krakow museum and the wings are corrugated (as are those on the Revell and Heller 1/72-scale kits - I haven't seen the 1/48-scale kit). I don't know if Broplan will do a 1/48-scale kit of the P-11c, but there are P-11c markings on their decals sheet. I am looking forward to comments from our members in Poland about this controversy.

Both these kits are very nice, but I don't think anyone but the most devoted PAF fan would choose to build them both. Either kit will make into an attractive model.

RVHP, 1/72-scale polyurethane kits. While I haven't seen any of these, a Czech member, Vladimir Stepanek, writes that the first ones are now available. The list of kits in their catalog is absolutely mind boggling: Aero Ac-02, A-10, A-11, A-12, A-18, A-29, Apb-32, A-42, A-304; ; Avia BH-7A, BH-9, BH-10, BH-11, Ba-33, Ba-122, & Ba-422; Letov S-1, S-3, S-6, S-10, & S-20; Praga E-39; Ansaldo SVA; LWF V; HC-102 & HC-3; Aero Ac-45; L-200 Morava; L-410A Turbolet. So, dust off your books by Nemecek, or better yet, purchase the book "Československé Letectví 1918-1939" (available from the SAFCH Sales Service) and drool over the color profiles while you wait for these kits to be released. I'll do a review as soon as I can get hold of one of these kits.

All the vacuum parts are useable except the engine which should be replaced by an AeroClub item. However, I have some worries about the construction; the upper surface of the wings has the gull-shape molded in, but it comes in two parts with the inner ends butt-joined to the fuselage. Even with the help of the wing struts, this may provide an

Now I must mention something about which I've become increasingly confused: What was the wing-skin surfaces used on each of the PZL gull-wing fighters? I had thought Warren Eberspacher settled this in his book, "PZL Fighters: P.1 through P.8" when he stated that "all subsequent version of P.7, P.11, & P.24" had corrugated skin on top and bottom surfaces with chord-wise "combs" on the lower surfaces. Both Broplan kits have "combs" on the lower surfaces, but smooth skin on both top and bottom. The drawings in "Samoloty Myśliwskie Wziesnia 1939" by Cieslak, Gawrych, & Glass, support the Borplan position. Now usually, I would accept anything with Andrzej Glass' name on it as Gospel, except that the drawings of the P.11c show no corrugations. Well, I've seen the P.11c at the

Spanish Hawker Fury, 1/72-scale, cast white-metal conversion kit. Delta Bits DB5008. Delta Aviation Publishing, 38 Hawksley Avenue, Hillsborough, Sheffield S6 2BE, South Yorkshire, England. £3.50. The conversion of the Matchbox kit of the Hawker Fury into a Spanish Fury should appeal to all modeler of the aircraft of the small air forces. This task, while not too difficult for the experienced modeler, is greatly simplified by the use of this Delta Bits set. The set consists of 8 cast-metal parts: 2-bladed propeller, radiator, cantilever landing-gear legs, wheels, and two small fairing for the cowlings. These parts are well molded with appropriately restrained surface detail and a minimum of flash. The instruction sheet includes a 1/72-scale drawing of the forward part of the fuselage and a step-by-step procedure. Besides replacing the radiator and landing-gear legs, some minor work has to be done to the cowlings including adding "20 thou plasticard to front of nose" (the appropriate-thickness plastic card is included). No color schemes are provided, but there are plenty of references on the Spanish Fury. In addition to the four mentioned on the instruction sheet, I can highly recommend 'Aviones en la Guerra Civil Espanola' Vol. 2, by Miranda and Mercado. Besides excellent 3-view drawings this reference includes multiview drawings of four Spanish Furies (1-1 to 1-4) in Republican and Nationalist markings. Most modelers will probably be satisfied with adding on Spanish Fury to their collection. However, the modeler with a collection of Spanish Civil War aircraft will certainly need to build two; one in Republican and one in Nationalist markings.

F11F Tiger, 1/72-scale cast resin cockpit set. Delta Bits DB5010. Delta Aviation Publishing (address above). £5.95. No small-air-force connection here, but a fine kit that will appeal to any of our readers with an unbuilt Hasegawa Tiger in the closet. The 7 parts are cast in a hard light-grey resin with no flash, no bubbles, and fine surface detail. Included are the ejection seat, control column, rudder pedals, instrument panel, cockpit tub, and port and starboard side

panels. Seat belts and buckles are not included. The instruction sheet gives full assemble procedures, but it is almost superfluous since assembly is so straight forward.

ELF Wheels, 1/72nd Scale Replacement Wheels. While working on a rather awful Russian manufactured kit of the Yak-6, I noticed that the Small Air Forces Sale Service had after-market accessories. Among those listed was a set of wheels by a company named ELF. Not finding anything similar in the Western hemisphere, I took a chance and ordered several sets. I can honestly say that I was truly pleased with the product. Each set comes with rubber tires and a sprue for the hubs. These are amazing in that they have a little undercut engineered into them to hold the tire in place. Elf even includes a tire and hub for the tailwheel!

Yak-6: This set for the Alfa kit (now available from Encore) includes two tires in the exact scale dimension with the proper tread and side-wall markings. That's right! With a light dry brushing, you can see the tire size markings even on the tailwheel! A superb effort which hard presses you to bring up the rest of the model to this level of quality. Highly recommended.

MiG-15: The second set may be used with the new DML kit as well as KP's older offering. Again, side-wall markings are there on both the main tires and nose tire. While all other hubs were molded in dark gray, this set was molded in light gray. The two piece main hubs looked like the male part was too deep for the other part since it jutted out pretty far. However, checking my references proved that they were correct.

Fw-190: This set is the only one that didn't jive with any of my references. It also was the only set to include two tailwheel hubs and tires. My main reference listed the actual butcher bird as having 700x175 main tire and 380x150 tailwheel tire. The kit's scale out to 691x173, 144x295 (tailwheel 1), and 144x331 (tailwheel 2). The main-wheel hubs are correct for the Ta-152C with larger main wheels. This aircraft was equipped with dual brake pads. These hubs would be correct for the outer face of the regular 190 series but I've yet to see the depicted

hub on the inner face of any aircraft other than the Ta-152C. Because of this, This set is not recommended.

Bf-109E: This set is for any of the Emil kits available. It is an excellent set which feature the correct main-wheel hubs. While others portray these as convex or concave, they are actually flat. However, they do need a bolt to represent the valve stem cover. The only discrepancy is that the tailwheel measures a scale 15 mm too small. Believe me, it is hard to tell in this scale. Recommended.

Bf-109G: With this set for the Gustav series, I received very good representations of the main-wheel tires, an excellent tailwheel tire, and an excellent hub for the latter. The main-wheel hubs have the bolts in the wrong location. I had no trouble shaving them off and placing them correctly. Recommended if you don't mind a little extra work.

All in all I really liked the idea of these sets. Since many fellow modelers warned of the evils of wheel rot on rubber tires, I went to the trouble of preparing molds for casting them in resin. However, since I do want ELF to continue releasing wheel sets, I'll continue buying and urge all of you to do the same. Perhaps the owner of True Details can commission these guys to produce the masters for their tire sets and re-do their complete line. Can you imagine your model kits all sporting the correct tire size markings on the side-walls? What about roadwheel tires for tanks? It boggles the mind!

Other sets from this series include the Spitfire, P-39, MiG-3, MiG-17, Yak-1, Yak-3, LaGG-3, La-5/7, Po-2, Il-10, Su-2, Pe-2, and SB-2. The bottom line, get these for your favorite Russian aircraft since those I received were the only ones to be perfect in size and with complete markings.

References: German Aircraft Landing Gear, Gunther Sengfelder, Schiffer Publications. Modelist Konstruktor, plans for the Yak-6 and MiG-15. My sincerest thanks to Greg Reynolds for his help. Photographs from my private collection.

Saul Garcia, 260 Lee Ave., Brooklyn, NY 11206-5482, USA.

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Croatian MiG-21F, Mi-24, Mi-8, & Cessna T-41. 1/72-scale decals. Delta Bits DD 72-005. Delta Aviation Publishing, 38 Hawksley Avenue, Hillsborough, Sheffield S6 2BE, South Yorkshire, England. £3.50.

This 10 cm by 9 cm sheet contains markings for 4 Croatian a/c: (1) MiG-21MF camouflaged dark green and mid stone (or dark earth) over light grey. Markings include red/white checkered shield for fin, blue roundels with two red squares for wing and fuselage, and black knights-helmet unit crest for the nose. (2) Mi-24 Hind E camouflaged in dark earth and mid stone over light blue-grey. Markings consist only of two red/white checkered shields for the fuselage. (3) Mi-8TV Hip C camouflaged in dark green, light green, and dark earth over light blue-grey. Markings consist of low vis shields (no white) for tail boom, blue roundels with red squares for fuselage, black codes 'H-205' for tail boom, black 'M8-MTU-1' for under cockpit windows, and octopus unit insignia for the doors. (4) Most exciting of all is a Cessna 172 camouflaged in olive green with irregular dark brown mottle with white undersides. Markings consist of 4 red/white checkered shields for the fin and wings, two smaller ones for

the cockpit doors, and black 'HZS' for the fin. These latter are shown as '1425' on the instruction sheet. A photo of this a/c in the book "Hrvatski Zrakoplovi" is not clear enough to determine the correct choice, but a color drawing in the 1/94 issue of Aeroplan definitely shows 'HZS'. By the way, you will have to 'de-spat' your Eidai kit of the 172.

The instruction sheets includes drawings of the port-sides of all a/c as well as plan-view drawings of top and bottom surfaces of the wings as appropriate. FS595 equivalents are given for all colors. The decals are well printed in perfect register with the small details, such as the five small crests above the shield insignia, very well done. The sheet is well-worth obtaining, if only for the Cessna markings.

Su-17M4R-22M4 Fitter, 1/72 decals. 72-033. Hi-Decal Line, Kilinskiego 22, 40-062 Katowice, Poland.

Another outstanding sheet from our friends at HDL. This one provides markings for four Sukoi's: (1) Ukranian Su-17M4R, yellow '34'; (2) Polish Su-22M4, red '7307' with "flying tiger" insignia; (3) East German Su-22M4, yellow '546' in a colorful

tiger scheme applied for its last flight in NVA service; and (4) German Su-22M4, '98+14'. The decals, printed in perfect register, provide all the national and unit insignia, codes, serials, and decorations needed. For the intake-warning markings and the stenciling, the modeler is directed to the HDL sheet 72-031 on the Su-17M4, although I suspect that the former can be found on the decals in the kits. The HDL instruction sheets are among the best in the business and this one is no exception. Port, starboard, and top and bottom plan views not only show the placement of all the decals but also the complicated camouflage patterns. Colors are designated by name (in English), FS595 equivalents, Humbrol, and Model Master numbers. A separate insert sheet diagrams the various armament arrangements and the placement of the stencils provided for the KKR reconnaissance container and the SPS ECM pod.

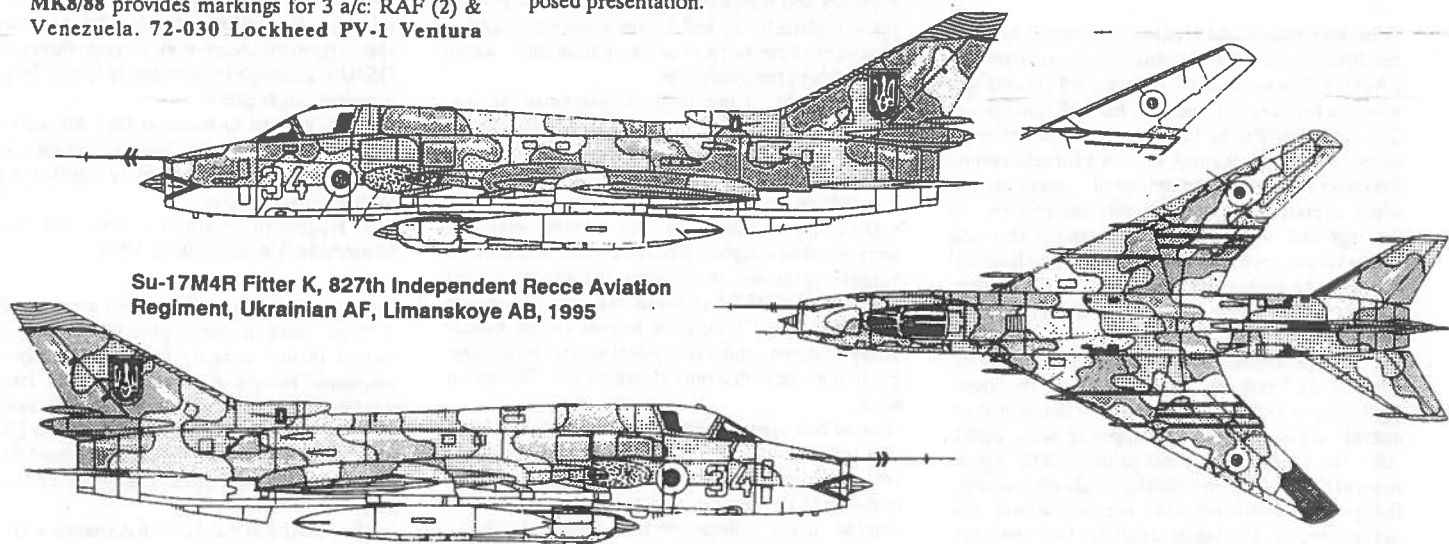
This decal set cannot be too highly recommended, especially to the modeler of modern small-air-force aircraft.

[Editor's note: HDL continues to expand their line of 1/48-scale decals. Since these are identical to their 1/72-scale counterparts, except for size (13 cm

Kanga continues to expand their excellent line of 1/72-scale decals. These sheets continue to reinforce Kanga's reputation for producing high-quality decals on unusual subjects. **72-023 Dewoitine D-520C** provides markings for 6 a/c: France (3), Bulgaria, Italy, & Germany. **72-024 Fokker D-XXI** provides markings for 6 a/c: Netherlands, Spanish, Finnish (2), & Germany. **72-025 SB-2** provides markings for 5 a/c: Soviet (4) & Finnish. **72-026 English Electric Canberra B(1) MK8/88** provides markings for 3 a/c: RAF (2) & Venezuela. **72-030 Lockheed PV-1 Ventura**

Kanga large decal sheets (14 cm by 18 cm) are well printed in excellent registration with vibrant colors, although the smaller lettering tends to be somewhat blurred. The instruction sheets contain one side view and top and bottom plan views, and views of stencil placements. Text is in the Cyrillic alphabet, but the colors are spelled out in English. The Kanga decals now come in sealed plastic bags, a considerable improvement over the previous exposed presentation.

After what seems like a long hiatus, Travers has released some new decals. These large sheets (14 cm by 21 cm) are rightly renowned for the high quality. These new releases will only serve to enhance this reputation. **72-035 P-38 Lightning:** all USAF a/c. **72-043 Hawker Hurricane:** RAF, Soviet, & Finnish a/c. **72-046 Bristol Beaufighter:** RAF, RAAF, & USAF a/c. **72-050 MiG-3:** Soviet a/c. **72-051 Harrier:** RAF & USMC a/c. **72-053 MiG-29 Fulcrum:** Soviet & Iraqi a/c. **72-055 Mirage III:** French, Israeli, South African, & Argentine a/c. **72-056 B-17 Flying Fortress:** USAAF a/c. **72-058 Korean War:** North Korean MiG-15 & USAF F-86.



**Su-17M4R Fitter K, 827th Independent Recce Aviation
Regiment, Ukrainian AF, Limanskoye AB, 1995**

"You asked for some comments regarding the cover photograph of SAFO Vol.20, No.3, October 1996. It is a German built Friedrichshafen FF 33L CHFT, German Navy number 1271. CHFT is the German naval code for a two-seat seaplane fitted with one machine gun and wireless receiving and sending equipment. The propeller-driven dynamo supplying electric current to the wireless equipment can be seen mounted on the starboard side. Aircraft 1271 was one of 45 ordered in February 1917 and delivered between May and July 1917, with the exception of three aircraft in September (2) and October (1) 1917.

In the Public Record Office file Air 1/713127/19/10 can be found a report, dated 3 February 1919, concerning German-Bulgarian aeroplanes, seaplanes, engines etc. inspected in Bulgaria by Capt. Wells of the RAF Salonika Aircraft Park. Aircraft described in detail are Fokker D.VII(Alb) 5324/18, Roland D.III 3000/17, Albatros C.III(OAW) 2363/16, Otto C.I 3580/15, DFW C.V 7906/17, Rumpler 6B1 Navy No.1046, Friedrichshafen FF 33E Navy No.862 and (believe it or not): Friedrichshafen FF 33L Navy No.1271 (the one on the cover!).

Capt. Wells gives a drawing of the Bulgarian triangle insignia: The left arm is green, the right arm is white and the bottom arm is red. From my poor xerox copy it appears the center is red(?) as well, but I can't confirm this. Perhaps someone can check it in the PRO at Kew. In the triangle center there is "the device of a lion." The fuselage triangle has sides measuring 2 feet 0 inches, and the wing triangles top and bottom measure 5 feet 0 inches. The camouflage (wing?) fabric is standard German navy material consisting of uniform hexagons in blue, brown and purple. The undersurfaces of the

Peter M. Grosz SAFCH #1320), 599 Pretty Brook Rd., Princeton, NJ 08540, USA.

"In reference to Charles Cooke's article on Small Air Forces Skyvans,(SAFO #79), I would like to add the following information concerning the Short Skyvans employed by the Mexican Air Force (Fuerza Aerea Mexicana).

"First the first four Short Skyvans (Skyvan 3) were delivered in 1974 and were coded TP-0213, 0215, 0216 and 0217. Later, three more were delivered to the Mexican Government: SH.1909, G-BAID, XC-GAY; SH.1911, G-BAIE, XC-GAZ; SH.1946, G-BDVM, XC-BOD (later TP-0214); and SH.1950, G-BDVP, XC-BOT.

"The first four Skyvans did not served in the 8/o.Grupo Aereo (Air Group) Escuadron Aereo Transporte Presidencial (Presidential Transport Squadron). Instead, they served in the UTAPFE - Unidad de Transporte Aereo del Poder Ejecutivo Federal (Unit of the Air Transport of the Executive Federal Power) stationed at Mexico City's International Airport.

From information gathered from different sources, including Mr. Cooke, I came up with my own listing of known Mexican Skyvans:

1. TP-210/XC-UTI
2. TP-211/XC-UTJ, also reported as XC-UTQ
3. TP-212/XC-UTK, SH.1952, ex Tp-0216
4. TP-0213 FAM, SH.1920 ex GBBL, d/d 22/1/74. XC-UTI sold to USA as N53NS Aug. 1990.
5. TP-0214/XC-UTM, later XC-UTQ; seen 3/29/93 SH.1946 ex G-BDVM ex XC-BOD; possibly became TP-211?, XC-UTJ in the 1970's.
6. TP-0215/XCUTN, SH.1951 ex G-BEHZ

d/d.30/1/77, sold as N52NS to the USA June 1990.
7.TP-0216/XCIUT(sic), SH.1952 ex G-BELY d/d
13/7/77; reported w/o.

8.TP-0217/XC-UTJ, SH.1953 ex G-BELZ, d/d 20/5/77, crashed late 1982; registered later in USA as N38314; March 1983 rebuilt and returned to FAM.

"Concerning the color schemes of the Mexican Skyvans: Not all carried the title ESTADOS UNIDOS MEXICANOS all the time. For example, a photo of FAM TP-0216 shown at Mexico city airport date unknown carries no tile. While TP-0215, at San Antonio, Texas, in January 1979, shows its ESTADOS UNIDOS MEXICANOS title. Another a photo I have, via Dan Hagedorn, taken of FAM TP-0213 at San Antonio, Texas, Jan. 1979, does not have the ESTADOS UNIDOS MEXICANOS title. While during a visit to San Ysidro, California on 28, March 1993, I took photos of Short Skyvan TP-214 with the title of FUERZA AEREA MEXICANA over the three windows. This aircraft carried civilian registration XC-UTQ. Another bird I photograph was TP-215/XC-UTN with the same titles in the same location; this aircraft was photograph in Jan. 1993. It is my belief that these aircraft went through some changes in their color schemes that still need to be documented via photos and data from government and private sources.

"In other developments concerning the Mexican Air Force, it was announced that the Air Force purchased 12 Mil Mi-8 Hip Soviet Helicopters following the lead of the Mexican Navy that has 12 in service. These are to be used in Counter Insurgency operations. This order does not affect the eventual delivery of 75 ex US Army Bell UH-1H Huey to the Mexican military for the sole use in the war

against the Drug Cartel.

"It has been announced, but not confirmed, that the Mexican Air Force has placed at order for 60 Aeromacchi (ex-Valmet) M290 TR Redigo Turbo Trainer. The Mexican Navy already has 11 in service.

Also, this year during the traditional "16 of September" military parade there will no fly by as in years past. This was the first anniversary of the last year's tragedy loss of one F-5E and the three T-33 that collided during their last run toward the center of Mexico City."

Santiago A. Flores (SAFCH #588), PO Box 430910, San Ysidro, CA 92143-0910, USA.

"Charles Cooke's fine article on the Small Air Forces Short (Shorts?) Skyvans, which appeared in SAFO #78, was welcome indeed, and I would like to add a bit here and there to his well-done piece. The Argentine Prefectura aircraft, in the section he devoted to color schemes, may be a bit misleading. He states that, when first delivered '... were painted white overall with the Argentine insignia on the fuselage and wings' I am not aware that and Prefectura aircraft ever carried 'Argentine insignia' if by this he means the blue/white/blue roundels. The earliest images I have of the Prefectura Skyvans match his description otherwise, except for two unusual items: the unique 'crossed anchors' used by the Prefectura was painted on the lower right wing and upper right wing, with the individual aircraft serial/code on the opposite wing panel. Also, the Argentine flag was painted on the upper vertical fins/rudder on both the inside and outside. Except on the early schemes, the central 'sun' was not painted on the inside area! By the time they received the white scheme again he mentions (with the three thin blue cheatlines) this had been corrected, and the titles on the rear fuselage had been enlarged and read only PREFECTURA NAVAL. While I agree with his description of the U.S. Coast Guard-style diagonal bands on the rear fuselage of the last scheme (one wide blue, one smaller white and one even smaller blue) the 'crossed anchor' device on the wider blue band was in white on the examples I have seen. At least one of the two aircraft he mentions as having been camouflaged in the mottled camouflage scheme was PA-51.

"I suspect that Charles has the service name for the

Ecuadorian Army incorrect: I believe it is correctly given as Servicio de Aviacion Ejercito de Ecuador. The single Skyvan c/n SH.1868 was coded T-201 (seen at Quito 28 Jan 77) but I find the code SAE-T-189 rather suspicious.

"On the Mexican Skyvans: This is a rather confusing episode and difficult to track. I think Charles had a couple of typos (it is, of course, Fuerza Aerea Mexicana) and the operating unit might more correctly be presented as UTAPFEF (Unidad de Transporte Aereo del Poder Ejecutivo Federal) and, more recently, GATP (Grupo Aereo de Transportes Presidenciales). The Mexican Skyvans have certainly sported a very wide variety of color schemes and mixes of titles, insignia, and government registrations, and I have a strong suspicion that some have been used more than once, which only adds to the confusion.

"With regard to the single Panamanian Skyvan, Charles didn't note that the FAP national rudder marks were painted on both inside and outside, and, oddly, the individual aircraft serial was also painted inside and outside of both vertical fins! It should also be noted that the extreme wing tips were painted dayglow. There is some evidence to suggest, by the way, that this was the scheme carried after the COOPESA re-build, as slides taken of the aircraft in the COOPESA hangar (while mostly stripped-down) show one panel under the cockpit painted white with a blue cheatline and 'Skyvan' in white.

"Friend Santiago Flores' article on the FAM cadre that trained with the USN on Dauntless aircraft is certainly most welcome, and we can only hope that additional details on this unique episode will emerge in the fullness of time. I tend to think, however, that the aircraft used may have been earlier variants than the SBD5, as virtually without exception older variants were used for training purposes as newer variants became available for line fleet units. It would be a most tedious exercise, but a look at the Individual Aircraft History Cards for the Dauntless might turn up the identities of these aircraft.

"I have a couple of comments on my good friend Tony Sapienza's feature on the Paraguayan Air Force de Havilland Beaver/Otter/Twin Otter Fleet (SAFO #70). Tony cited the single ex-Argentine DHC-3 Otter as having been donated to the FAP

25 August 1972. However, this is slightly in error, as I have the turn-over date as 9 November 1971 and actually saw the aircraft myself at Asuncion on 28 January 1972 in full FAP colors as T-05. Readers may also be interested to know that the FAP came very close to acquiring two DHC-6-300s (c/n 744 and 748) as s/n 2027 and 2029 but these were not taken up for some reason and went to other users. They had actually been painted in full FAP colors at Downsview, Toronto, when seen.

"I must confess that I was astonished to see Jorge Nunez's sideview (1983) drawing of the alleged Argentine Navy OS2U-3 Kingfisher on the same page (page 79). By now, I am sure you have heard from Jorge in this regard, as, if I am not sadly mistaken, this never happened. I have no record of the Argentine Navy ever having operated any OS2U's, although I would dearly love to be proven wrong in this regard!

"Finally, wanted to mention that Aircraft of the Chaco War, prepared by Antonio Sapienza and the undersigned, will be released by Schiffer in either December or January."

Dan Hagedorn (SAFCH #394), PO Box 682, Centreville, VA 20122-0682, USA.

"In response to John Cochrane's article in SAFO #75 on small-air-force philately, I have saved stamps in this category from the foreign IPMS magazine I receive. A partial list follows: Italy 1981 AerMacchi MB 339 (200 lira); Canada early 80's deHavilland Canada Dash 7 (\$0.35); and Belgium 1994 Hanriot-Dupont HD-1 (13Bf), Spad XIII (15 Bf), Schreck FBA.H (30 Bf), & Stampe SV-4B (32 Bf)."

Bill Lee (SAFCH #454), 5556 Annandale Dr., Virginia Beach, VA 23464.

Editor's Note: Long-time SAFCH member Fritz Braun (#220) of Germany has written to inform me that because of advancing age and ill health he has had to give up the hobby. He asked me to thank all those who have helped him in the past and to apologize to those he has not been able to reply to during the last few years. All of us who knew Fritz wish him a peaceful retirement. Good luck Fritz.

-wants&disposals-wants&disposals-wants&disposals-wants&disposals-wants&disposals-wants&disposals-wants&disposals-wants&disposals-

"I am seeking information, photos, and personal accounts about the following Boeing aircraft. (1) Boeing TK.1 (KC-97L/C-97G) Stratofreighters of Escuadron 123/Ala 12 of Spanish Ejercito del Aire. (2) Israeli Boeing Stratocruisers/Stratofreighters. I have a photo of KC-97G IAF-31/4X-FPT with a strange nose-radome(?). Any ideas? (3) According to some books, Boeing YC-97 N9045C of Seven Seas delivered three Fouga Magisters to the Katanga Air Force in February 1961. Any details or even photos of this YC-97 would be very much appreciated. (4) While not really related to a small air force, I am looking for information and photos of USAF and civil Stratofreighters, especially the Joint Church Aid USA and International Red Cross Stratos to the Biafran airlift, Boeing 377 Stratocruisers, and Guppy conversions." Martin Bach (SAFCH #1275), Theodor-Storm-Str. 16, D81245 Munchen, Germany.

"I am writing in the hope that you can help me. I'm the new archivist of IPMS Italy and, while recording old magazines, I found the enclosed article in IPMS

USA Quarterly, Vol. 13, #2, 1977. I immediately realized it was the subject I wanted for my 1/48 Hobbycraft Hurricane. I would like to have more precise documentation of this a/c including the type of external seats used, the structure of the nose wheel, and any other information that would allow me to make a good replica. Apart from the building the model, I would like to write an article for our magazine. Could you help me in this research by indicating where I can find more information? For example, I know there is an aircraft museum in Peshawar, but what is the address?

Fabrizio Arletti, Via Matteo Maria Boiardo 30, 42040 Bagno, Reggio Emilia, Italy.

[Editor's note: The IPMS article is titled 'The Dodo' and was written by G. Knox Bishop. An extract of the pertinent parts follows: "This aircraft was a war weary Hawker Hurricane IIC used by the 151st OTU of the Royal Indian Air Force at the Peshawar Air Base in the winter of 1945-46. It was called 'The Dodo' by the squadron staff because it never flew. The aircraft resulted from field modifications which added: wing spoilers, 2 external seats, and a nosewheel. The purpose of all that

metal bending was to acquaint Indian AF pilots with the problems of using hand brakes while taxiing.

Although the drawings in the original article doesn't mention colors, I assume that the normal RAF yellow with black stripes would have prevailed. There is absolutely no details on the undersurface colors. No fuselage or upper wing insignia or serial numbers were carried. The original article, titled 'Instructing in India' appeared in the 9 October 1947 issue of the British publication, 'Flight and Aircraft Engineering'. It was written by one of the OTU pilots, Flt. Lt. Edwards." If anyone has information that would help, please write directly to Fabrizio.]

"I am looking for two books from the Aircam Aviation series which were published by Arco Publishing: #3 Hayabusa (Ki-43) and #18 Type 97 (Ki-27). Any information about where these books can be purchased, prices, and postage fees would be of

Continued on page 135.

Gloster Mars VI Nighthawk in the Royal Hellenic Air Force

Elias Papadimitriou

In 1923 the Treaty of Lausanne ended the bitter war between Greece and Turkey and forced the Greeks to give up all claims to lands in Asia Minor. The previous year, the Royal Hellenic Air Force (RHAF) undertook a modernization program. At the beginning of 1922, a five-person team was sent to England to purchase the best available fighter aircraft. In a short time 25 Gloster Mars were ordered.

In January 1923, the boxes with the unassembled Mars arrived at Tessaloniki. By April, "E" Squadron (later named the "Death Squadron") was formed under the command of Captain P. Magiakos. By the time the Treaty of Lausanne was signed on 24 July 1923, 13 Gloster Mars had been received by the squadron and were serviceable although they saw no action before the Treaty was signed.

At first, these aircraft were painted aluminum with serial numbers 1-13 on the fuselage. They carried the blue-white-blue national roundels above and below the wings and the same color vertical rudder stripes. Later these aircraft were painted overall dark green with aluminium-painted metal panel on the front part of the fuselage. Codes, now "delta" (e.g. delta-85 and delta-86), were painted in white on the fuselage and under the wings.

The Gloster Mars were the only first-line fighters in RHAF service until 1936-37 when the first PZL-24F/G began to arrive. The Mars were then withdrawn from the Training School at Tatoi and transferred to Larissa and Sedes air force base for use in the early stages of fighter training. They were finally grounded in 1939 when problems with the landing gear made them too

dangerous for further use. They remained in storage until April 1941 when they were destroyed by Luftwaffe attacks. The Mars took no part in the 1940-41 operations.

Modeling the Greek Mars:

Blue Rider in England is the only company to produce a kit of the Gloster Mars in any scale and any medium. Their kit is a 1/72-scale vacuform with the engine, propeller, and wheels in white metal and photo-etched landing gear, control column, and seat. Decals are provided for two machines; one RAF and one Greek (the latter code "delta"84 in white). The only thing you have to add are the wing struts.

Velocette Scale Models had announced a 1/48-scale vacuform kit of the Gloster Mars. but after repeated attempts to contact them, I have had no response and do not know if this kit is in production. If any SAFO readers has information on this matter, it would be very helpful.

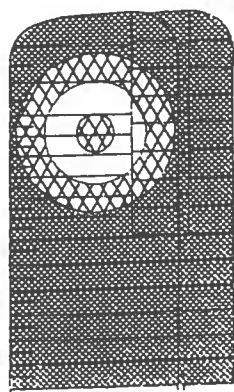
References:

"Aircraft of the Hellenic Air Force from 1912 to Present" IPMS Greece.

"Air International" Vol. 18, No. 6

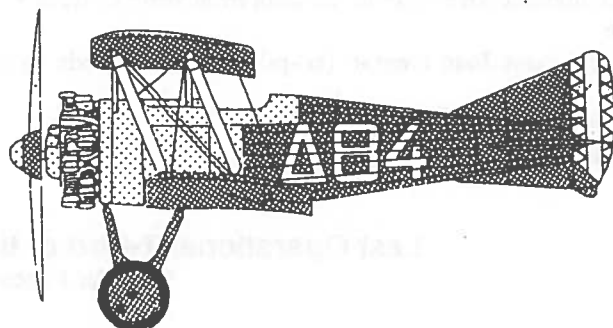
"39/45 magazine" No. 46.

Elias Papadimitriou (SAFCH #1361), Dimocratias 10, GR-30300 Nafpactos, Greece.



light blue

'delta'84 is applied under lower wings, facing forward on starboard wing, and to the rear on port wing



Nieuport Nighthawk Serial No. 'delta'84, Elliniki Stratotiki Aeroporia (Greek Army Air Force), 1923-1938

Continued from page 134.

great help to me. I have heard of a book, Spad Scouts, has recently been published by Glencoe Models. I wonder is this is the same book that was published by Arco and sold by Osprey some twenty years ago. I am also looking for three plastic kits: (1) Type 97, Ki-21 Sally Bomber, 1/72 by Revell. (2) Type 100, Ki-49 Helen Bomber, 1/72 by Revell. (3) Q-5 or A-5, NATO code name Fantan A, jet fighter of Communist Chinese Air Force. Vacuform kit in 1/48(?). Maker of kit is unknown; I think it was a British manufacturer, but I am not sure."

Yukio Onoguchi (SAFCH #), 2-25-12 #B-217, Midorigaoka, Meguro-ku, Tokyo 152, Japan.

[Editor's note: There was a 1/72-scale vacuform

Fantan produced by Warrior Models in Poland. Does anyone know of a 1/48-scale model? If anyone can help Yukio, please contact him directly.]

"The insignia book is progressing well, but I could use some help from SAFCH members on the following. (1) Afghanistan: I vaguely remember seeing an insignia early 70s consisting of a red disc with yellow inscriptions. Is this true and does anyone have any details? (2) Cambodia: The 1955-70 insignia is now current again. Red outer and blue inner, or reverse? Is one order wrong or did it change and if so why? (3) Laos: Are there any photos of drawings of the insignia consisting of 3 horizontal bands with a device in the middle? I may have missed one somewhere, but it's a gap in the files. Any help

much appreciated."

John Cochrane (SAFCH #905), 6 Bonnington Avenue, Crosby, Liverpool, L23 7YJ England.

"I am researching a couple of articles for future issues for SMALL SCALE AVIATOR. (1) Blitzkrieg Poland: I'm planning to run this next year featuring both Luftwaffe and Polish AF types in kit form, units involved and colours etc. (2) Sino-Japanese War: This is a longer term project that I'm building gradually. I am looking for any photos from the period or help with colour schemes etc of aircraft used."

Glenn Ashley (SAFCH #1427), 38 Hawksley Ave., Hillsborough, Sheffield S6 2BE, South Yorkshire, England.

The Brazilian Savoias

Antonio Linhares

Civilian Savoia S-55

In 1926, the Brazilian aviator Joao Ribeiro de Barros and his mechanic went to Italy to pick up a Savoia-Marchetti SM-55 flying boat. Because the Savoia factory was unable to provide a new airplane, they acquired the aircraft named "Alcyone" which had been previously been used by the Italian pilot Casagrande. The ex-Alcyone was christened "Jahu" in honor of Ribeiro de Barros' birthplace.

While still at Sesto Calende, the ex-Alcyone received several improvements such as new engines which were the same as used in the military versions. In the meantime, Commander Del Prete arrived at Sesto Calende and informed Ribeiro de Barros that another Brazilian, De Pinedo, intended purchase a similar airplane and would try to fly to Brazil before Ribeiro de Barros.

On 13 October 1926, "Jahu" took off from the Lago Maior for Gibraltar, with a stop at Genoa. However, on the way to Gibraltar, the crew discovered the plane had been sabotaged: they found soap and dirt in the fuel tanks.

After repairs in Gibraltar, they flew on to Cabo Verde, where one of the hulls had to be repaired resulting in another, longer delay. "Jahu" finally arrived in Sao Paulo on August 1, 1927.

This aircraft is now preserved at the Brazilian Aeronautics Museum.

Crew:Joao Ribeiro de Barros (commander)

Lieutenant Artur Cunha (co-pilot from Sesto Calende to C. Verde

Lieutenant Joao Negrao (co-pilot from C. Verde to Sao Paulo)

Captain Newton Braga (navigator)

Vasco Cinquini (mechanic)

Military Savoia SM-55A

In 1931, the Brazilian Government acquired 11 Savoia Marchetti SM-55A in exchange for coffee. They were delivered to Rio de Janeiro under the command of Italo Balbo and were incorporated into the Naval Aviation after a solemn ceremony at the place that was later to become Rio's International Airport.

Some Italian technical personnel remained in Rio to give instruction and assistance to Brazilian personnel.

During Uruguay and Argentina's National celebration, it was decided to send 7 Savoias to Buenos Aires to represent Brazil. Despite problems associated with bad weather, new airplanes, and a long flight, six of the Savoias reached Buenos Aires. They returned safely to Rio each airplane having covered 4,000 km in 30 hours of flying time.

In July 1932, a Constitutionalist revolution took place in Sao Paulo. The Federal Government sent 6 Savoias to bomb the Cubatao reservoir and the Itaipu Fortress near the city of Santos. The pilots had instructions to avoid bombing the civil population and the city which was the site of an important harbor. Brazil had a new Constitution in 1934.

The S-55 A flew in Brazil until 1936. They were numbered from 1 to 11 and were designated P 1 S (P = patrol; 1 = 1st type; S = Savoia).

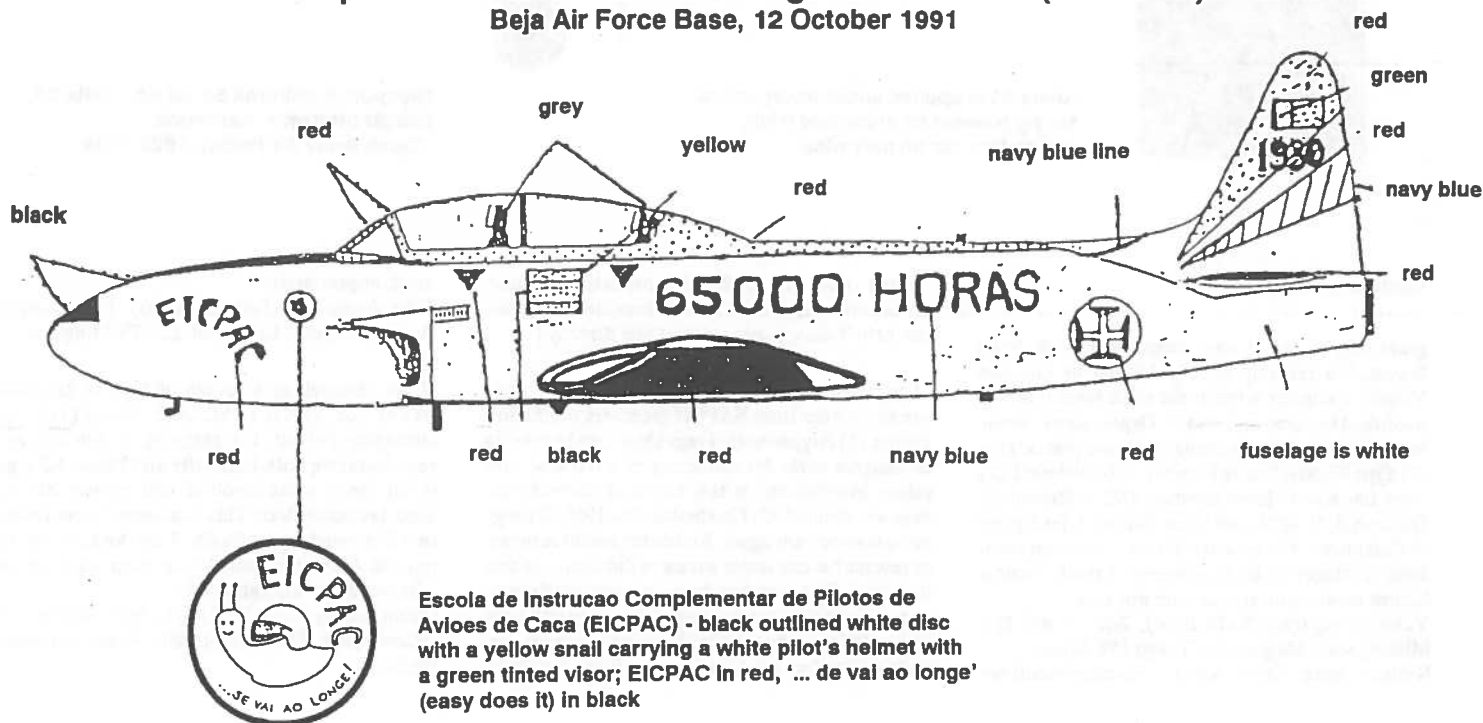
Acknowledgments:

Annabella C.S. Linhares (translation). Robson Anselmo da Silva and Claudio Lameira (drawings)

Antonio Linhares, Rua Lucidio Lago 457 Apt. 206, Meier,
Rio de Janeiro, RJ, CEP 20780-0201, Brazil.

Last Operational T-Bird of the Portuguese Air Force (FAP 1930)

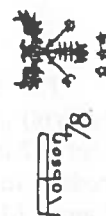
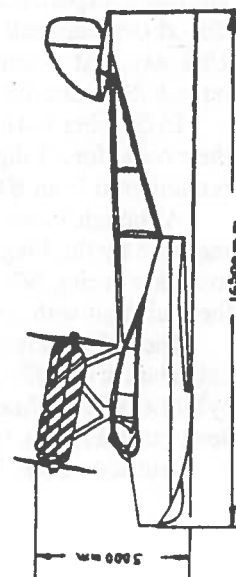
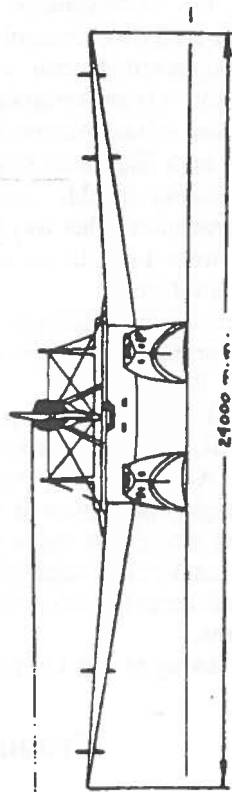
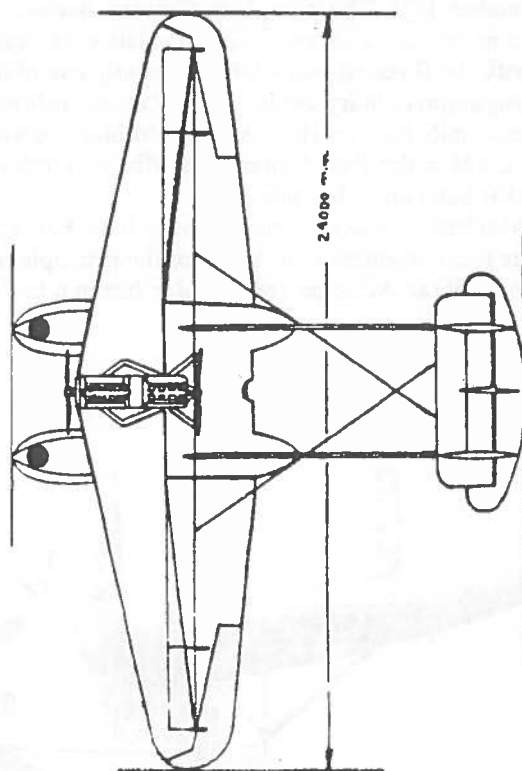
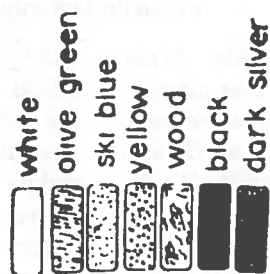
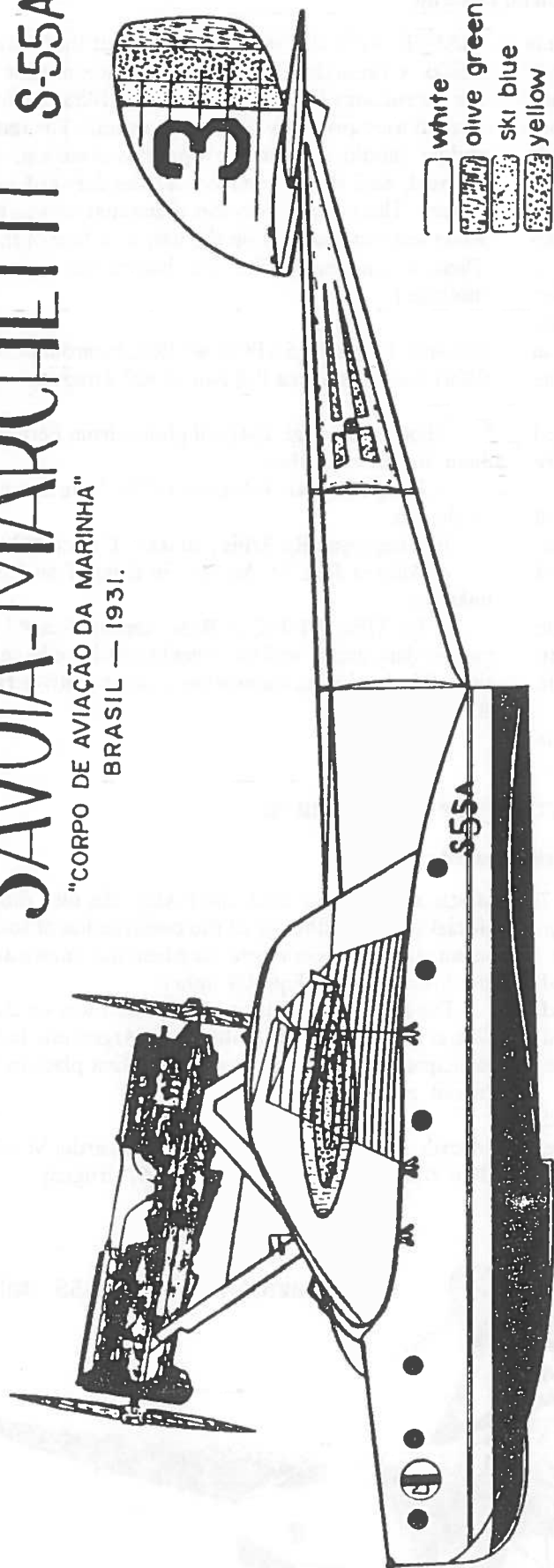
Beja Air Force Base, 12 October 1991



SAVOIA-MARCHETTI

S-55A

"CORPO DE AVIAÇÃO DA MARINHA"
BRASIL — 1931.



Uruguayan Romeo Ro 36bis

Eduardo Luzardo

The Uruguayan Aeronautica Militar (then under Army control) acquired the Ro-37bis in 1937. The first four aircraft (c/n 817 to 820) arrived on 12 November. They were assigned codes 1 to 4 and were stationed at Base Aeronautica #1 (Boiso Lanza, Montevideo City). On 19 November, aircraft '5' was received and the last, '6', arrived on 6 December. In March of 1940, the Ro 37bis were reorganized: Aircraft 2, 3, and 5 formed an Escuadrilla de Informacion at Base Aeronautica #2 (Durazno) while the others remained at Base Aeronautica #1.

On 17 July 1941, while on a flight near Ombues de Oribe, aircraft '2' experienced mechanical troubles, and the crew abandoned their aircraft via parachutes. This was the first time in Uruguay that parachutes were used in an emergency. The parachutes were the new 'Salvatore'.

In October 1941, all Aeronautica Militar aircraft exchanged their codes for a 3-digit system. The five remaining Romeos were renumbered from B1-100 to B1-104.

Although it was difficult to obtain the special engine oil required by the Piaggio PXR and spare parts were impossible to obtain during WWII, the Aeronautica Militar regularly used these aircraft with the last flight taking place in early 1945.

The information in this article was taken from an article published in the official Fuerza Aerea Uruguay Bulletin written by 1st Lt (R) Juan Maruri and from Maruri's new book, "Historia de la Fuerza Aerea Uruguayana."

[Author's note: The drawing of the Uruguayan Ro-37bis

(SAFCH #77) was very well done, but there are a few minor mistakes: From the examination of photos and the official painting instructions for the Aeronautica Militar of that period, the aircraft were probably dark green overall. The red stripe on the rudder should slant in the opposite direction, similar to the roundel, and dark green covers the forward portion of the rudder. The cowling was flat aluminum as was the propeller. Roundels were carried on the under surface of the lower wing. There was a small white 'Ro' before the numeral '6' on the fuselage.]

Eduardo Luzardo (SAFCH #1383), Picardia M.267 S.37, 91001 Barros Blancos R.8 Km 22.500, Uruguay.

Photos (see page 104) All photos from Fernando Diaz and Juan Maruri via author.

a. Uruguayan Ro 37 bis circa 1938. Note line-up of Potez 25 on the left.

b. Uruguayan Ro 37bis, aircraft '1' circa 1938.

c. Alferes Jose M. Mazetti in front of an Ro 37bis. Date unknown.

d. Ro 37bis 'B1-102' at Base Aeronautica #1 in 1942. The cowl is dark green and the wheel spats have been removed. A sign of the beginning of a new era is the recently-arrived T-6 seen at the left.

Uruguayan Martynsyde F.4 Buzzard

Eduardo Luzardo

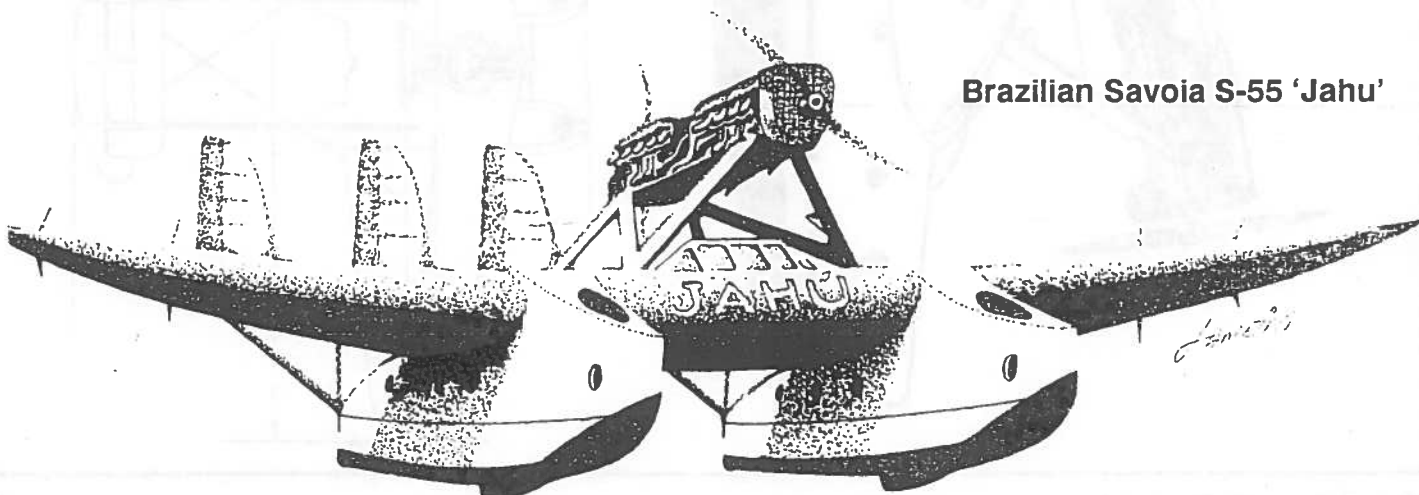
A single Martynsyde F.4 Buzzard arrived in Uruguay on 7 September 1925. The pilot, Maj. Cesareo Berisso was a major figure in the early history of military aviation in Uruguay. Arriving with the Buzzard was a DH-9, the only one of its type used in Uruguayan military service. These two aircraft were donated by the Comité Nacional Pro-Aviación Militar and were obtained from the Handley Page Commercial Mission for the River Plate based at San Isidro, Buenos Aires.

Maj Berisso was very impressed with the F.4 and he pushed for the local production of the F.4 as the principle military type for the Militar Aviación (which later became to Aeronautica

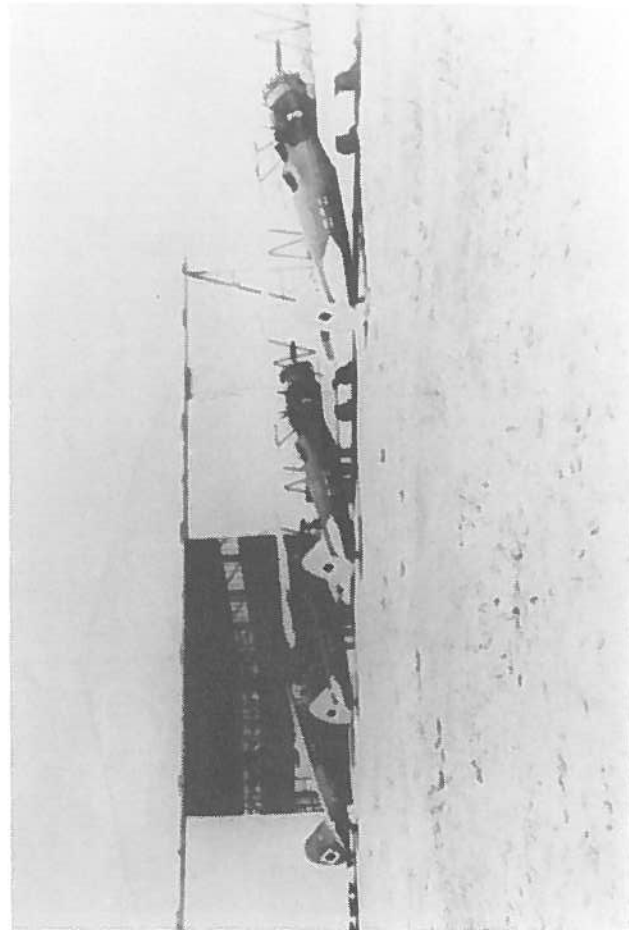
Militar and then, in 1953, the FAU). His idea did not achieve official support although of the construction of some parts had begun at the Escuela where the plane was known as the ACME for 'Avion de Caza Tipo Escuela'.

The last flight of Berisso's Buzzard was on 21 September 1926 at Castelar and El Palomar in Argentina. In Castelar, he participated in an air show winning a first place in the 'Balloon Pursuit' event.

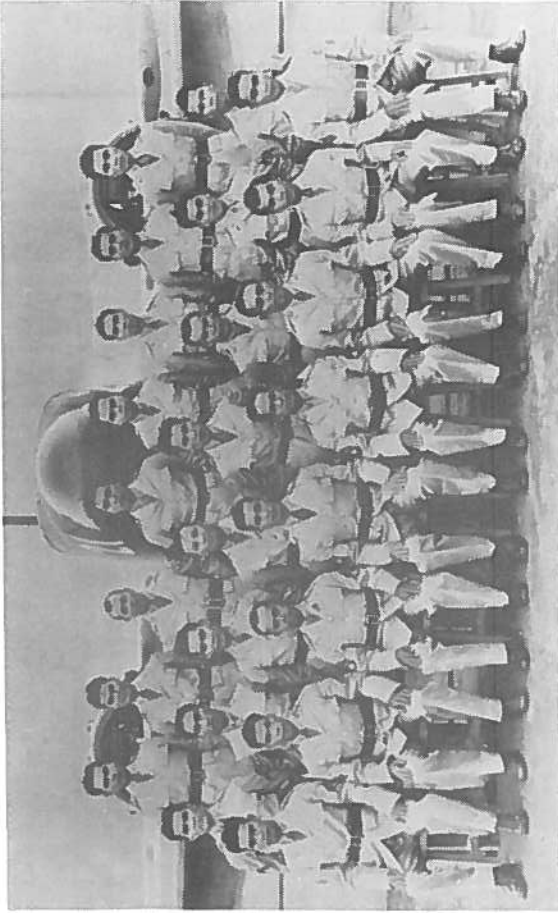
Eduardo Luzardo (SAFCH #1383), Picardia M.267 S.37, 91001 Barros Blancos R.8 Km 22.500, Uruguay.



Brazilian Savoia S-55 'Jahu'

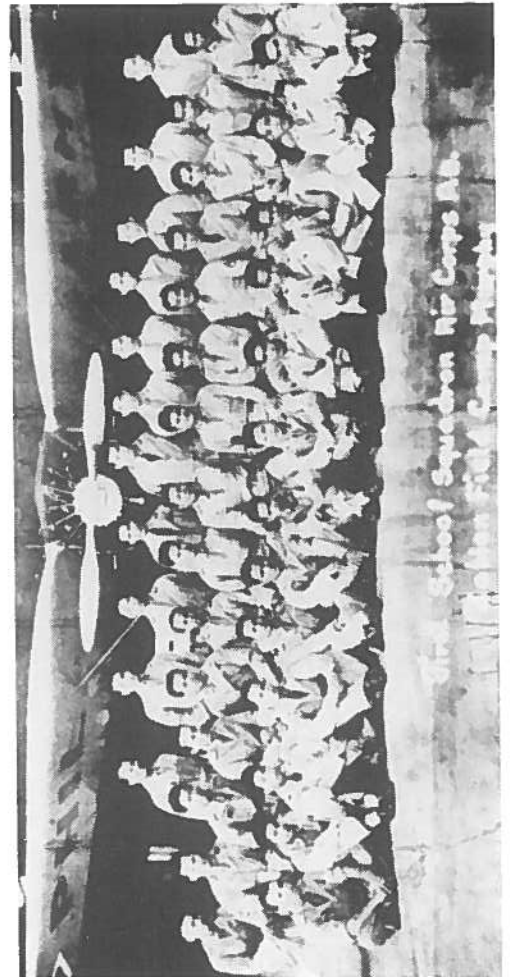


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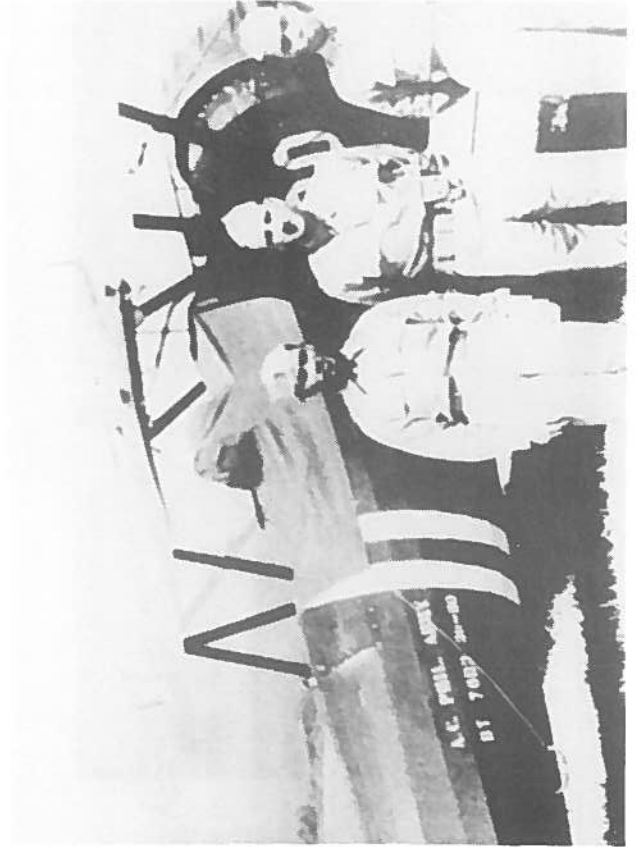


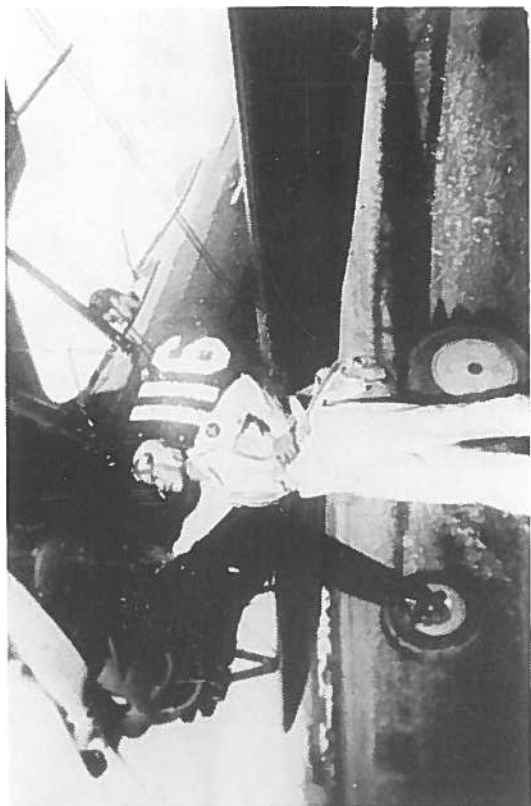
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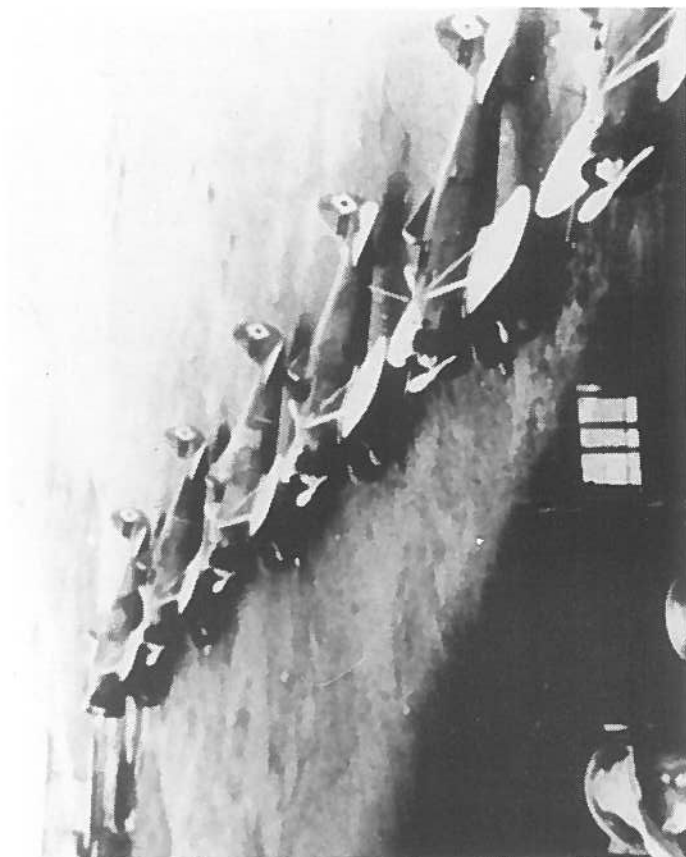
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